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COURIER OF MEDICINE.

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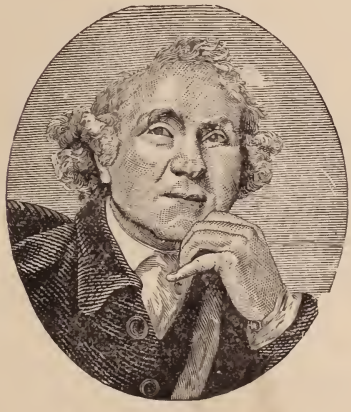
VOLUME VIII.



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ORIGINAL ARTICLES.

TRACHEOTOMY.

BY PROF. J. T. HODGEN, M. D.[1]

[*Lecture before the Post-Graduate Class of the St. Louis Medical College.*]

THE operation of tracheotomy may be made either above or below the isthmus of the thyroid gland, but as a rule it is much easier and simpler to go above it. In the first place, having placed the patient upon a table, with the head drawn back over the edge so as to make the throat prominent, a transverse fold of skin should be pinched up and then transfixed in the median line with a sharp-pointed bistoury. There are two layers of subdermal connective tissue: the first, or fatty layer, is intimately connected with the skin; the other is loose and allows a considerable freedom of movement of the skin upon the subjacent tissues. By thus pinching up a fold of skin and transfixing it, a clean cut is made at once through the skin and the upper layer of connective tissue. The same method of commencing is of service also in operations for hernia.

[1]This was the last lecture delivered by Prof. Hodgen.

The objective point in the operation of tracheotomy is the cricoid cartilage. It is a vastly different matter to feel the cricoid cartilage in an adult from detecting it in a fat baby. I have seen a good anatomist (one who had not practiced surgery much, but yet a good anatomist) mistake the thyroid cartilage for the cricoid until he had cut down upon it.

Having made the incision through the skin, we must cut directly down upon the cricoid cartilage. This may be done at once with a single stroke, if necessary, to expedite matters as much as possible. Generally, however, there is sufficient time to allow of more careful work. With the handle of the scalpel, or with two pairs of forceps, the tissues may be separated or torn back, and by keeping directly in the middle line the opening may be made between the two muscles. A grooved director, or probe-pointed scissors blade, may be slipped under the layers of connective tissue, which are thus successively divided until the isthmus of the thyroid body is reached. This may be in immediate contact with the cricoid cartilage, or may be at a little distance from it. Generally, it is so near as to be in the way of the incision into the trachea. No great harm would likely be done if this isthmus should be divided. There would probably be no serious difficulty in controlling the bleeding from any vessels that would thus be divided. Yet, it is easy to avoid all possibility of trouble, unless the case be extremely urgent, by slipping an aneurism needle, or a probe with a ligature, under the isthmus, tying it on either side and then cutting it between the two ligatures. Or, on the other hand, and probably better, we may with a pair of scissors or knife divide the firm membrane that binds the thyroid body on either side to the cricoid and thyroid cartilage, thus loosening it to such an extent that it can be drawn down out of the way. At the same time the grasp of this body with the forceps enables your assistant to hold the parts quiet in making the opening into the trachea.

There is now time, unless the case is extremely urgent, to arrest the flow of blood from any of the divided vessels. I have here in my hand the simplest and best and most valuable instrument that you can have in the next step, that of opening the trachea. It is simply a hair-pin, or a bit of wire doubled in the same way as a hair-pin, and then bent on the flat so as to make a sort of looped hook. I would advise you to place the loop of this hook immediately in contact with the side of the blade of your scalpel, and then as you press the point of the knife through the tracheal rings you pass the wire at the same time, and then, by giving it a quarter turn downwards, the incision is spread open, the child takes a full breath, and quickly falls to sleep.

Right here is a point to which I wish to call attention. Not infrequently—in fact as a general rule when a child has been struggling for breath for hours, it may be, and an opening is made into the trachea so that the air enters easily and freely—there will be, after one full inspiration, an entire arrest of all respiratory movements for several seconds, so that one who is not prepared for it may be alarmed. But if you watch the face you will observe that even while the respiration is arrested the color is constantly improving; the livid hue is passing away, and the natural hue is returning to the lips and cheeks and brow, and after a few seconds, sometimes as much as a half minute, the respiratory movements are resumed, and the child breaths easily, falling into a quiet, peaceful sleep. The explanation is apparent: the child was poisoned with carbonic acid, and there was oxygen in the air inhaled by the long inspiration after the trachea was opened.

Another advantage of the bent hair-pin is that it forms the readiest and best guide for the introduction of a tracheotomy tube. By placing the end of the tube against the two wires it slips down into place without any possibility of going wrong.

There are some objections to the use of trachea tubes

at all. Sometimes it is difficult to withdraw the inner tube for the purpose of cleansing it. Sometimes the lymph will obstruct the outer tube too. In such cases it is best to remove the tube altogether, and, if necessary, keep the wound open by inserting the bent hair-pin.

Dr. Martin, of Boston, advises to discard tube entirely. He passes a needle threaded with silver wire through two of the divided cartilaginous rings on each side; draws the wire over rolls of oiled paper, and connects them by tape passing around the neck.

I, myself, arranged a spring speculum, acting on the same principle as a spring speculum used to keep the eyelids separate. It, however, is unsatisfactory, as the pressure made by the spring is generally not well borne, and later the granulations around the wound may close it up. I consider it the best plan not to use any tube until two or three days after the operation, when there is usually comparatively little danger of the tube being obstructed by membrane. I think the parents or nurses are apt to attend to the nursing better if there is simply the wound to watch and keep clear than if there is a tube to be removed and replaced.

Now, as to the after treatment. When the patient has breathed through an opening in the trachea for a few days, the larynx becomes very sensitive to the passage of air through it, and a child will always resist the attempt to close the opening. We determine the question whether it will do to close the wound by first placing a cork in the tube. It is best to try a child in the first place by dropping into the tube a conical cork when it is asleep. If this can be done without exciting a paroxysm of coughing the tube may be safely removed. It is well to accustom the child to the passage of air through the larynx for twenty-four hours before removing the tube. There are tubes specially provided with fenestræ for this special purpose. When the tube is removed, the opening should be left perfectly free; no attempt made to close it by sutures or adhesive plasters. The granulations grow very rapidly, sometimes may reach together and close the opening in an hour or two.

It sometimes occurs in the case of adults that the tracheal rings are ossified, and break when they are divided.

In order for self-protection, and to avoid unnecessary annoyance to the parents or friends, they should be informed before the operation that, as a necessary effect of the operation, the patient will be unable to speak.

The management of the case after the operation is completed is a matter of the utmost importance. The temperature of the room in which the patient remains should be warm, 75° to 85°, and moist, though not saturated with moisture. Then I direct the mother or nurse to take two pieces of flannel, six inches square, fold them once each way, dip in hot water and lay one of them directly over the mouth of the tube. The loops to which the tapes are attached will prevent it from closing the tube too tightly. This should be changed for a fresh one every five minutes for a day or two, and the fresh compress should be ready so that no time shall be lost in making the change, so that there shall be no inspiration through the uncovered tube. The frequent changing of these flannel compresses should be continued until there is a decided diminution of the secretion.

Some one should be constantly with the child during the first three or four days, or as long as the profuse secretion continues, who shall be instructed to remove the tube entirely in case of its becoming suddenly plugged with mucus. The last winter a patient of mine died in this way. The father had been with him constantly for two or three days, and the child having progressed very favorably, he had left him with the grandfather while he lay down to rest for a while. He was soon aroused with the statement that the child was dead, and on going to him, sure enough the child had ceased breathing. The father was going to remove the tube as he had been instructed, but the mother and grandfather and others insisting that the child was already dead, would not consent to any manipulation at all. I have no doubt that the father

would have saved the child's life if he could have had his own way about it.

The operation of laryngo-tracheotomy, cutting directly through the cricoid cartilage itself, is easier of performance than tracheotomy proper. It has been urged in favor of tracheotomy that the trachea is larger below than at its entrance to the larynx at the cricoid cartilage. This is true, but is a matter of little importance, for the trachea tube is not so large as the lumen of the cricoid cartilage.

As to the different forms of trachea tubes, those with loose collars are no better than the others; the hard rubber tubes are unsatisfactory, they are too thick and clumsy; celluloid ought to be an excellent material. The inner tube ought to project a little beyond the outer, rather the opposite.

As a rule, anesthetics are not required in the performance of this operation, the sensations of the patient being sufficiently blunted by the carbonic acid that has accumulated by reason of the imperfect aeration of the blood.

Some physicians are opposed to the operation on account of having seen so little success, so few recoveries after the operation. Yet I think that any one who has seen the immediate and decided relief afforded by the operation where a child has been for hours, it may be, struggling for breath, slowly dying from strangulation, would not oppose the operation, even if the only end attained be that of rendering death less painful and distressing.

SULPHATE OF QUININE—ITS USE AND ABUSE.

BY GEO. M. DEWEY, M. D., KEYTESVILLE, MO.

[*Read before the State Medical Association, at Hannibal, Mo., May 17, 1882.*]

IN the following essay I do not propose to sing all the praises of this drug, nor to write its epitaph.

I shall not detail its physiological effects or chemical

analysis, but will consider it mostly from a clinical point of view. Its history is so well known that it needs no recital.

The discovery of quinine was a greater boon to the human race than that of any other drug in the materia medica. Before its discovery, pernicious intermittent and remittent fevers were as deadly as cholera or small-pox. Now, when death results from a congestive chill, as pernicious intermittent is called by the laity, the result is charged to the physician's ignorance.

If we have a drug that deserves the name of a specific, it is sulphate of quinine for ague. For nearly all diseases of a remittent or intermittent type, it deservedly ranks high; especially those that have no organic lesion. But for many maladies for which it is now fashionable to use it, it has no curative power.

It is the custom with most of the physicians of this country to give quinine during some stage of every disease that flesh is heir to. Some give it for one purpose, and some for another; many because they don't know what else to do. A bottle of quinine can be found in every family in the rural districts of Missouri that have the means to buy it.

The reason that most doctors give for their extravagant use of it, is that nearly all our diseases are caused by that undiscoverable something called malaria—a universal poison; the antidote quinine. Dr. Dickson, in his book on the Unity of Disease, announced the syllogism: "All diseases are varieties of ague; quinine cures ague; therefore quinine cures all diseases." Every human being, from Florida to Pike's Peak, is supposed to be more or less poisoned by malaria. If it had as firm a hold of our bodies as it has on our minds, our condition would be deplorable indeed.

Whatever evil results have grown out of this delusive theory should be charged to those teachers in medicine who originated it, and to the doctors who believe and practice from it.

If quinine cut any figure in the cure of a tithing of the cases in which it is so confidingly administered by the average doctor, we could abide a false theory.

In my intercourse with physicians, in consultations and in medical societies, I find very few who believe that quinine can possibly do any harm. They use it as the old lady did her blister. "If it did no good, it would do no harm."

The prefix *anti-* seems better suited to quinine than any other drug we possess. It is antiperiodic, antimalarial, antiseptic, antiphlogistic, antipyretic, antibacterian and antimortemic. Consequently it will prevent or cure nearly all our maladies.

We sneer at and ridicule our fathers for having such a mixture of calomel, and bile, and liver in their theory and practice of medicine. Has the substitution of quinine for calomel added many years to human existence? Are decayed teeth greater afflictions than shattered nerves? In making up a theory for fevers, was not derangement of the portal circle as plausible as malaria? Is it not more tangible? As a rule, a medicine that is potent for good is also potent for evil. Is quinine an exception to this rule? To what else shall we attribute the late enormous increase of suicide and insanity, but deranged nervous systems through the excessive use of quinine? Can any drug be innocuous that can weaken our hearts, and make us blind and deaf?

That quinine is capable of making powerful and deleterious impressions upon the nerve centres, and thereby affecting the nerves of special sense, needs no proof. There are but few persons in all this broad land who have not been deafened by it, and some made amaurotic.

Dr. H. C. Wood states, in his book on Therapeutics, that he has seen complete temporary amaurosis produced by it in a lady by twelve grains. Dr. Von Graefe saw two similar cases. Dr. Flint mentions another.

I will relate a case that came under my own observation:

Mr. G., aged 22, was attacked with pneumonia. There was a prolonged cold stage, lasting some hours, during which his physician gave him about half an ounce of quinine in divided doses.

There was considerable bilious vomiting and a good deal of the drug was thrown up. In less than twelve hours the patient was totally blind and deaf. In seven or eight days the deafness entirely disappeared, but the blindness remained.

Three months having elapsed, he could hardly distinguish night from day. The pupils were largely dilated and insensible to light. Mr. G. consulted many physicians in the country, and some in St. Louis. He received little or no encouragement from anyone. He visited the Eureka Springs and came home somewhat improved. His sight has been gradually improving, and now, at the end of eighteen months, he is able to go about his farm and attend to business a little.

If quinine can thus destroy the function of the nerves of special sense, it must do so by congesting the vessels of the parts, and acting mechanically, produce partial paralysis.

Physiologists inform us that neither the auditory nor olfactory nerves have any sensibility per se. We are also told that irritating the floor of the fourth ventricle of the of the brain will produce sugar in the urine. Now, as diabetes prevails mostly in what are called malarial regions, and in subjects who have had many attacks of ague, and consequently taken much quinine, may we not reasonably infer that quinine, by producing congestion of the fourth ventricle, is the prime originator of diabetes?

I now propose to discuss some of the therapeutic uses of quinine, whose value I do not acknowledge.

Quinine as a Tonic.

I have never met with a doctor who did not believe that quinine is a tonic in disease, if not in health. Still I think habit and tradition have more to do with its use in this respect than clinical results will justify.

So far as my own observation goes, I must say I have

never yet seen it used in any case in which I thought it increased the appetite, or in any way promoted digestion or assimilation. But, on the contrary, its most constant effect has been to irritate the stomach and create a disgust for food. And instead of hastening convalescence from acute disease, it protracted it.

I have seen a good many unthinking men, whose observation was not very acute, give convalescing patients two or three grains of quinine two or three times a day, and the patient finally recover. Better results would have followed if they had taken a few grains of starch.

It is doubtful whether any of the vegetable bitters are tonic unless they are astringent also. Though strychnine is not an astringent properly, it acts in a similar manner by contracting the tissues. Alcohol does the same. The infusion and tincture of cinchona are decidedly tonic and astringent also.

Headland, in his work on the Action of Medicine, says: "Quinine is not in any sense an astringent."

Trousseau, that prince of observers of the action of medicine, says:

"Sulphate of quinine fulfills all the indications of cinchona as a febrifuge, but not as a tonic. The febrifuge virtues of this salt cannot be questioned; they are as evident as those of cinchona itself; but it is more irritant than the bark, both on account of its great solubility and because it has not the corrective, namely tannin. It causes chronic gastritis and diarrhea much oftener than cinchona." (Trousseau's Therapeutics, vol. 3d, page 121.)

I will also quote from another observer of large experience and acumen, Dr. J. Hughes Bennett, who, like Oliver Wendell Holmes, was not disposed to rob nature of her trophies won in many a conflict. He says:

"Quinine is also spoken of as a tonic when given in small doses. This property seems to have been attributed to it on account of its bitterness. * * * But whether it increases the appetite, stimulates the digestive organs, or in any other way operates by increasing the tone of the system and impairing the nutritive powers, is a circum-

stance which, though generally adopted as true, admits of strong doubt.

"No doubt it is very frequently given to convalescents and weakly persons, who get better under its use; but whether this is owing to the quinine, or would have occurred equally well without it, is a matter very difficult to determine.

"Of one thing I am satisfied, namely: it is far inferior in tonic properties to many metallic and other vegetable drugs, and consequently a medicine with such valuable antiperiodic properties, the supply of which is also yearly diminishing, should not be wasted in endeavoring to produce effects so very doubtful as the tonic virtues which have been ascribed to it.

"For many years, therefore, I have not given quinine as a tonic, and have yet to meet with a case where it is necessary to administer it in order to increase the strength of the system." (Bennett's Clinical Lectures, page 948.)

I would not be dogmatic, nor under-estimate the professional acumen of the brethren, still I feel compelled to say that fashion and tradition have more to do with the use quinine as a tonic than clinical results.

Millions of dollars are yearly squandered and doctors and patients deluded in the belief that quinine is a tonic.

Quinine in Pneumonia.

New-made graves, funeral processions, mortuary reports, sable-draped widows and orphans, are sufficient commentaries on what quinine can do for pneumonia. A great multitude of people have fallen victims to this disease during the last six months in Missouri, a vast majority of whom, from the initial chill to the death rattle, received a potion of this great antipyretic about every two hours.

It is given in this disease for various reasons and for no reason whatever. Some give it to pull the patient down; others to push him up. One gives it because the patient sweats too much; another because he sweats too little. Some men believe they have aborted pneumonia with quinine. The probability is there had been no conception.

A good many other remedies have the reputation of producing these abortions, such as ergot, aconite, blood-letting, blisters, etc. Clinical experience teaches us that pneumonia will frequently abort about the fourth day, whatever may have been the treatment, or with no treatment whatever.

In a lifetime I have seen but two pneumonia patients benefited by quinine. In each it was complicated with remittent fever.

What good reason or special indication can be found for giving quinine in pneumonia, I never could see. This disease, when once fully established, has as fixed and definite a course to run as the exanthemata, and quinine is as powerless to hasten its termination or lessen its danger as theirs.

The most experienced men in the profession have the least confidence in medicine, and the most in food and digestion in the treatment of pneumonia; and as quinine unquestionably impairs the appetite, it is contra-indicated.

If quinine is the great antipyretic which some men claim it to be, and if it is so by reason of its power to weaken the heart's power, may we not reasonably conclude that the frequent reports we hear of late of sudden deaths by heart-clot in pneumonia are due to quinine?

One thing is certain, reports of deaths from this cause have greatly increased since the use of quinine in this disease has prevailed

Some physicians prescribe quinine in pneumonia to weaken the heart's action, and combine it with carbonate of ammonia to prevent this being done.

Quinine in Typhoid Fever.

The use of this drug in typhoid fever has the sanction of custom and high authority.

The reason generally given for its administration is to abate the temperature by weakening the heart's action. That it will do this nobody doubts. But that in the end it is beneficial, some entertain very serious doubts.

In half dram doses it will weaken the heart and the muscular system generally, conditions we should sedulously avoid in this disease. So soon as the effect of the drug has passed off, say in twelve hours, the heart beats on as before, the heat returns, and the malady pursues the even tenor of its way—only the patient is more nervous, more delirious, the stomach more irritable. Day after day there must be a repetition of this treatment with like results. It may be said that cold applications have to be repeated day after day. But cold water is ten-fold more efficient, and a hundred-fold safer.

But, as the opinion of a doctor who never wrote a book nor delivered a lecture will not go for much, I propose to quote from the highest living authority in Great Britain on this subject. Sir William Jenner, in a lecture before the Midland Medical Society, of Birmingham, on the treatment of typhoid fever, published in the *London Lancet*, 1879, says:

"Quinine, in occasional large doses, or in smaller ones, repeated at intervals, has been followed by a reduction of temperature in typhoid fever.

"Salicylate of soda is said to have a like effect.

"When judging of the effects of these and other drugs for reducing temperature, one must not lose sight of the fact that a sudden fall of temperature when no drug is given is not of unfrequent occurrence, and also that the temperature varies daily.

"This natural fall of temperature I have seen attributed to the use of this drug.

"I must say I have been disappointed in the effects of the two drugs I have named as reducers of temperature, while I have seen both do much harm by disturbing the stomach and interfering with digestion. In a disease which runs a limited course, like typhoid fever, the greatest possible care should be taken to preserve the powers of the stomach, as the life of the patient may depend on his power to digest nourishment towards the end of the disease."

I will also quote a few lines more from Trousseau's Therapeutics. In Vol. III., page 163, he says:

"The daily intermittent and remittent type is especially

peculiar to catarrhal fevers. Sulphate of quinine in these cases is not able to prevent the fever from developing and becoming continual, exacerbating and paroxysmal.

"It may even be very harmful, as it is at the beginning of certain typhoid fevers, which are very insidious, through the very marked quotidian and intermittent type which they take on at the invasion.

"The untimely administration of the sulphate of quinine stimulates the system dangerously, irritates the digestive tube, kindles the fever into fresh heat; and in spite of the success recently attributed to its use in typhoid fever, we have always found it hurtful in those exceptional cases where, by inevitable error or inattention, we gave it at the beginning of this fever."

It will be said that Trousseau and Jenner lived in a purer atmosphere than we do; that travel in a foreign country would have corrected their estimate of the therapeutical value of sulphate of quinine in the treatment of typhoid fever; or that the name, typho-malarial, would indicate the use of this drug.

Specious theories could never lead such men to underestimate or over-estimate the value of their therapeutics.

I will now give the practice and teachings near home.

Last December I was invited to a lecture on typhoid fever at a St. Louis hospital. A patient, a young man about twenty years of age, was brought before the class with typhoid fever in the second week of the disease.

To all appearance he was progressing finely; appetite good; temperature 102°; no delirium; but little cough; but little tympanites or diarrhea.

This patient seemed to me to need nothing but good diet. But the lecturer thought differently. He directed him to have ten grains of quinine three times a day.

What the object could be under the circumstances of prescribing the quinine, I don't know. He probably thought that ghostly demon malaria was lurking in the wards.

In order to give the class back-bone in the use of quinine, the lecturer stated that he had given as much as fifteen or sixteen hundred grains of quinine to a patient during one

attack of typhoid fever, with no deleterious result. What the indication was for this enormous administration of quinine, the professor did not state. He may have been trying to ascertain how much quinine it would take to kill a man—making a toxicological experiment. If it was given as a tonic, the patient's system must have been at low tide at the start; if as an antipyretic, the patient must have been incandescent, and would have cremated without it; if as an antiseptic, poison deep and dank lurked in every vein.

If it took sixteen hundred grains to cure one case of typhoid fever, this should convince the most skeptical of its utility in this malady.

As the average duration of typhoid fever is twenty-one days, this patient must have taken about seventy-six grains a day. If he was not deaf and blind when he got up, he must have had an alligator's nervous system, and an ostrich's stomach.

Will not some ambitious young man in that class, anxious for notoriety, outstrip the teacher by administering two or three thousand grains?

The young gentlemen who listened to this lecture received it as the voice of inspiration. If the professor has not written a book, he has probably been to Europe.

> If on some hobby once we jump astride,
> We ne'er dismount, but to the devil ride.

Quinine in Septicemia.

I will premise what I have to say on this subject by quoting the language of a very eminent member of the profession, one whose experience in the treatment of diseases where septicemia is supposed to run riot is greater than that of any other man in America. He says:

"At the present day septicemia seems to have taken full possession of the medical mind, and in my judgment, as in numerous instances in medical history, there is a tendency to exaggerate its frequency and importance." (Barker on Diseases of the Puerperal State, page 400.)

By many physicians quinine is given as a preventive of septicemia. If there be any known sign or symptom from which we can confidently predict this event, I have not heard of it. If "coming events cast their shadows before," I have failed to observe them in blood poison. If there be no signs or symptoms of coming blood-poison, how can we know we have in any case prevented it?

If we had sufficient ground to believe quinine would prevent it, we might be justified in giving it for every traumatism.

Is there any better evidence that it will cure septicemia than there is that it will prevent it?

If blood poison is produced by bacteria, or some living organism, we can find an excuse for its administration, as it will destroy fungi and infusoria out of the body; but, as blood poison intrinsically tends to debility, it is certainly bad practice to give quinine in the depressing diseases its admirers advocate. If the blood is deteriorated in septicemia, it would seem to be the indication to make new and better blood; and as quinine impairs digestion, it is contra-indicated in this disease.

But as men differ in opinion as to the preventive power of sulphate of quinine in septicemia, I give the views of an eminent obstetrician of St. Louis, as advanced in a lecture on natural labor, to which I was invited in last December. The professor advised the class to give every parturient woman twenty grains of quinine every morning for seven days. The reason given was to prevent septicemia.

How often has septicemia resulted from natural or even unnatural labor? Shall that which was ordained for life be in us death? Is parturition a physiological or a pathological act? To say the latter, is a libel on nature and an insult to God!

The diligence and meddlesomeness of the brethren of late may have changed this natural to an unnatural process somewhat.

The only curse imposed upon our first mother for the too free indulgence in fruit was that she should bear children

in sorrow and pain. Nothing was heard about septicemia till the gynecologists came to the front.

Since Adam and Eve stepped out of the garden, a good many women have gone through the puerperal state unscathed who never heard of quinine. Millions of heathen women annually pass through this ordeal unpoisoned and *unquinineized*. If civilization and refinement has brought us to this, would we not better return to barbarism?

Every young gentleman who listened to this remarkable lecture went home fully impressed with the deadly tendency of parturition. Still his fears may be somewhat assuaged by the pleasing reflection that 140 grains of this ringing antiseptic will surely carry his patient safely through the "valley and shadow of death."

"Far better dead and never see,
Than poisoned by this monster be."

Whether or not these are the teachings of all the colleges in America at present, I have not the means of knowing, but it probably is so, as medicine is nearly as much the creature of fashion as dress.

Errors in the theory and practice of medicine committed by obscure physicians in the rural districts can do but little harm; but false dogmas, coming from the colleges, carry wide-spread destruction in their wake. Heresy from the pulpit will corrupt the church.

Shall we, as do lawyers, blindly follow precedent, right or wrong, kill or cure?

One who reads the medical literature of the day may well believe the whole earth is poisoned. Formerly it took heat, moisture and vegetable decomposition to generate malaria; but, since quinine has come into general use, it is found from the depth of artesian wells to the snow-line. The victims of the late expedition to the north pole probably perished from this fell destroyer.

This poison lurks in every breath;
The purest air engenders death.

It is far easier to see the errors of the fathers than our own.

It requires courage and brains to raise one's self above one's surroundings, either in politics, religion or medicine.

To disbelieve in the fallacies taught in the schools may be rank heresy, deserving the pillory or stake, still some men prefer martyrdom to apostacy.

A COMPLICATED HEPATIC ABSCESS.

BY W. F. GRINSTEAD, MARBLE HILL, MO.

[*Read before the Southeast, Mo., Medical Society.*]

HEPATIC abscess is the result of suppurative inflammation of the liver. It is a disorder of no great frequency in this climate—finding its most common habitat in low-lying, hot and malarious districts.

The term "suppurative inflammation," employed above, suggests the probable existence of another form of hepatic inflammatory action. It is insisted upon by some of our most learned and experienced observers that a careful distinction be made between suppurative hepatitis and perihepatitis. The one is an inflammation of the parenchyma of the organ, which may lead to resolution and terminate in a few days, or to suppuration and exist for several months. The other is an inflammation of the investing membrane of the organ (Glisson's capsule), which may lead to extensive adhesions to other organs, to an effusion of pus beneath the hepatic sheath, or to general atrophy of the parenchymatous structure.

In some cases of parenchymatous hepatitis resulting in abscess, the morbid process is very insidious, and none but the wary practitioner will discern the real nature of the malady. He is called to the patient who seems to be the subject of acute hepatitis. He has stabbing pains in the

right hypochondrium, increased by pressure. He also has rigors and fever. Inquiry into his history reveals nothing of importance. Patient has complained of malaise for several weeks; perhaps with no marked symptoms of any character until this time. The doctor at once diagnoses acute inflammation of the liver, and accordingly institutes spoliative treatment, which proves spoliative to the life of his patient, rather than to the progress of the disease.

A post-mortem examination reveals an abscess which has existed for an indefinite time, and in extending either toward the abdominal parietes, the right lung, or some other point, has given rise to the above symptoms by coming in contact with the capsule of the liver.

As already stated, suppurative hepatic inflammation is a disease of hot, malarious regions. It is sometimes caused by an injury, in which violence is done to the right hypochondrium. A much more common cause is portal phlebitis, due to surgical operations upon the rectum. A still more common cause is dysentery, the rational hypothesis obtaining here that the portal blood is contaminated by the fetid contents of the intestine.

There is no doubt that the disease is often associated with dysentery. This is such a striking fact that some have concluded that hepatic abscess not thus complicated is of rare occurrence. Dysentery is especially prevalent in that climate which we have learned is most favorable to the production of hepatic abscess. We find one of its most prolific sources in portal congestion, induced by repeated attacks of ague. Thus we see marsh miasm indirectly at work generating dysentery.

We will now turn our attention to the condition of the liver, which we find associated with this climatic congestion of the portal circle. We now find that organ (which, by the way, has been punched and physicked more than any other one organ in the body) in a swollen and hyperemic condition. In chronic conditions of this character the hepatic cells become pale and filled with fatty granules.

This is at once a condition favorable to suppuration. The vessels are turgescent and the blood current slow, a state of things highly favorable to the migratory movement of the white blood-corpuscles.

In subjects laboring under the paludal cachexia, we should remember that these little bodies are in excess; and Cohnheim has declared them identical with the pus corpuscles. Now the point I am endeavoring to set forth is readily reached. It is this: Malaria, with its inevitable accompaniments, high solar heat, etc., is the chief cause which predisposes the human organism to both maladies.

Our patient becomes saturated, so to speak, with miasmatic poison. The pathological state of the portal circulation, as well as that of the hepatic tissue described above, at once follows. At this point the body is subjected to a sudden arrest of perspiration, which causes an attack of dysentery. The portal blood soon becomes tinctured with the putrid contents of the intestines, and a suppurative inflammation is lighted up in the liver. With reference to the pathological changes which take place in the hepatic structure while the destructive inflammatory action is in progress, but little need be said. They are, to all intents and purposes, similar to those which take place in other organs.

Until a recent date the majority of these cases remained intact till death. From one-half to four-fifths of those operated upon resulted fatally. Since the introduction of the aspirator, however, the mortality has apparently been lessened. The most favorable point of spontaneous opening is through the right lung. Next to this is through the abdominal parietes. Thirdly, through the intestinal canal. A number of other directions are sometimes taken, usually with a fatal result. With this, somewhat lengthy, premise, I now proceed to report a case of hepatic abscess which has recently come under my observation, in a somewhat complicated form:

Feb. 16th, 1882, I was called to Mrs. T. J.; married;

twenty-four years of age; mother of four children; a native of Southeast Missouri. Previous health reasonably good, with the exception that up to six months ago she had suffered from chronic fever and ague, which had resisted all treatment for about twelve months.

Marked prostration was apparent in her features and in her voice. If I remember accurately there was a hectic flush glowing upon one cheek. My first impression, previous to examination, was that my patient had phthisis pulmonalis. I think my first question was to learn if she was troubled with cough. She answered in the negative. An inquiry into the history of the case informed me that she had been suffering one month. A physician had examined her, and had treated her for pleurisy. She continued to suffer from the pain in her right side. She had light fevers daily, later in the case, which arose about the middle of the afternoon, usually, and subsided near midnight. This febrile action was followed by profuse perspiration. Her appetite was lost, and her strength gradually disappeared. The pain in her right side was somewhat increased by a forced inspiration. The integument was swarthy, but the tongue clean.

On directing my attention to the right hypochondrium, I found it swollen and tender, but no discoloration presented, except that which pervaded the integumentary structure throughout. I stated, unhesitatingly, to the good woman that she had an abscess in her liver, and that I must subject her to a little operation for the removal of its contents.

After a short consultation with her husband, who is a tiller of the soil, I set the second day following for the operation. Pursuant to appointment I called on Feb. 18th, and by means of the aspirator drew off one-half pint of sanious pus, the odor from which was very offensive. I could have removed much more of the fetid matter, but at this point it became deeply dyed with blood, and apprehending dangerous hemorrhage into the abscess cavity, further procedure was postponed to Feb. 23d, at which time I again

aspirated, removing a pint of the same character of pus.

Before leaving the room, the patient called my attention to a pain in the lower part of her abdomen, on the opposite side, which was giving her some annoyance. An examination revealed only a small elevation of the abdominal surface at the margin of the left ilium, near the middle of its crest.

The patient was very slightly, if at all, sensitive. I told her that, in my opinion, she had another abscess at this point, but we would leave this alone for a week, and note the developments.

I neglected to say that from the beginning I ordered a tablespoonful of pure whisky in half a glass of rich, sweet milk every three or four hours. This I deemed indispensable as a supportive measure. Furthermore, about fifteen minims of deodorized tincture of opium, with four grains potassium iodide, three or four times daily was ordered—the opium to secure sleep and rest, which was more or less disturbed, and the iodide as a depurant.

My next visit was March 1, at which time I plunged the large needle of an aspirator into the abdominal cavity at the crest of left ilium, and drew out half a pint of creamy, laudable pus. On withdrawing the instrument from this point, I inserted it into the right hypochondrium again, and removed half a pint of fetid sanious pus, as described above. The three punctures now made in the right hypochondrium were at different points, but in close proximity. My object was, finally, to give spontaneous exit at a number of small points, through which the discharge would take place slowly, thereby preventing the admission of air.

I now ordered two drams of carbolic acid, with four ounces of olive oil, to be held in readiness, with the instruction to the husband, on the first appearance of pus from either of the cavities, to cover up the points of exudation with a strip of muslin saturated with the carbolized oil. The object of this procedure is apparent.

Three days later the hepatic abscess opened through two of the punctures; and on the fourth, the puncture in the lower belly discharged likewise. I did not see the patient again until the seventh day, when I found her doing well. The abscesses kept up an almost continuous discharge through the small orifices made by the needle. The appetite improved from the time the milk punch was ordered; and the opiate secured fair rest and sleep. Of course the patient was greatly prostrated, lying in a helpless condition. Her strength, however, soon began to reappear, to my intense gratification.

I saw the patient but once from that day to last Wednesday, when, on passing that way, I called to see what progress she had made, and had the pleasure of seeing her walk about the house with the assistance only of a light crutch, which she carried under her left arm. The hypochondrium has entirely healed, but the other abscess continues to discharge in small quantities.

DIPHTHERIA.

BY DR. E. MONTGOMERY.

[*Read before the St. Louis Medico-Chirurgical Society, Feb. 21, 1882.*]

From 1860 to 1865 we had a great many cases of diphtheria in this city; indeed, at one time during those years it was epidemic. Since then, I have seen many attacks of a sporadic form, and I have been much interested in the disease; have watched it closely, and have carefully read everything on the subject which came within my reach.

Diphtheria is a constitutional or blood disease; it is eminently contagious, and infectious to a considerable degree. It occurs sporadically, endemically and epidemically. Its most striking characteristics are sore throat, painful and difficult deglutition, swelling or enlargement of the tonsils, the parotid

and submaxillary glands; a hyperemic and edematous condition of the tonsils, soft palate, and uvula, which in a short time present a plastic ulceration, or false membrane, of a dirty white-paint color: soon this pultaceous false membrane will assume a darker hue, or grayish color, and will be easily removed, leaving a red corrugated sulcus, or furrow, which in twelve or twenty hours will be again covered with a false membrane of the same description and character. This pultaceous membrane may extend into the larynx, trachea and bronchi, and even into the esophagus and stomach, and if brought into contact with any abraded surface of the cuticle it will there be developed. In grave cases this diphtheria exudation will also appear in the nostrils, the anus, the vagina and urethra.

In a few days this diphtheritic membrane assumes a putrescent appearance, and if extensive emits a most offensive odor.

In the accession of this disease there is considerable fever, quick pulse, elevated temperature, restlessness, want of appetite, and early and well marked prostration. Albuminuria is present in most cases, but this is probably of slight importance as to diagnosis, prognosis or treatment. Paralytic sequelæ are eminently pathognomonic of this malady.

The etiology of diphtheria is still *sub judice;* but all agree that tender age, impure water, bad drainage, imperfect ventilation, and a constitution impaired by previous illness or other predisposing causes, will favor the invasion of the disease. Many authorities adopt the germ theory, and it appears very probable that low vegetable organisms are the exciting cause; the fact that an apartment once occupied by a diphtheritic patient will affect a person living in the same room, even after a lapse of many months, would seem to favor the germ theory. Another fact seems to indicate the same conclusion, namely, that in all cases of diphtheria vegetable organisms, in the form of micrococci, are found, and the more severe the attack the more numerous are these micrococci.

Dr. Lionel Beale, the learned and accomplished microscopist and pathologist, denies this germ theory, and even expresses his belief that there are few morbid conditions that are solely due to the growth and multiplication of vegetable fungi.

There is no doubt, however, of the fact that this disease may be excited and propagated by the direct implantation of the disease germs, whatever these may be. The contagium may enter the system with the food we eat, the water we drink, or the air we breathe.

Like small-pox, scarlatina, and other highly contagious diseases, diphtheria probably never arises spontaneously.

The mortality of this disease is very great; from numerous statistics the death rate is reckoned at from thirty to fifty per cent.

The principal causes of death are adynamia, toxemia, excessive formation of false membrane and thrombosis.

As to the identity or non-identity of croup and diphtheria, I would remark:

Croup is mostly, if not altogether, confined to children; diphtheria attacks both children and adults.

Croup is not infectious or contagious; diphtheria is eminently contagious and also infectious to a great degree.

Croup generally comes on in the night, has little if any period of incubation, and the crowing respiration (clangor of Cullen) is one of the earliest symptoms. Diphtheria may be developed at any time, day or night; does not come on suddenly, but has a period of incubation of one or two days, and has not the crowing sound or sonorous breathing for two or three days.

Croup is not signalized by early prostration and adynamia, whilst early prostration and failure of the vital forces are constant in diphtheria.

In croup there is no swelling of the tonsils, parotid or submaxillary glands; in diphtheria there is great enlargement of those parts.

In croup the exudation of false membrane is mainly con-

fined to the larynx, trachea and bronchi; in diphtheria the exudation pervades the mouth, the soft palate, the tonsils, uvula, trachea, urethra, larynx, bronchial tubes, nostrils, vagina, anus, and abraded cuticle.

In croup, the false membrane is quite different from the pultaceous exudation of diphtheria, and has not that most offensive odor so characteristic of diphtheria.

In croup the false membrane is better organized, and when ejected by emetics exhibits casts of the bronchi, which does not obtain in diphtheria.

In croup we have no paralytic sequelæ; in dipththeria these sequelæ are pathognomonic.

As further evidence of the non-identity of these diseases I might allude to the very opposite treatment pursued.

I can fully indorse the very successful treatment of croup promulgated by Dr. Fordyce Barker, but this treatment would certainly prove fatal to almost every case of diphtheria.

In the treatment of diphtheria we must guard against blood-poisoning, the formation and extension of false membrane, prostration and sinking of the vital powers, and complications in the heart, lungs and other organs.

In all cases the hygienic conditions should be as favorable as possible; a large, well ventilated room, with the temperature from 60° to 65°; nourishing food, beef-essence, cream, milk, egg-flip, and often wine or brandy. If the case is seen early, the first medicine administered should be a purgative of calomel and jalap; this I would not repeat except the patient was very robust; a little phosphate of soda, or tartrate of potassa and soda, will be sufficient to prevent constipation and to promote the secretions.

Although the calomel and jalap purgative is not pleasant to take, and will sometimes nauseate, I prefer it to any other to eliminate the poison from the system.

After the purgative, the muriated tincture of iron with glycerine should be given every three hours, and persevered with for a considerable time, as it acts happily both

as a local and a constitutional remedy. The chlorate of potassa, sulphite of soda, or the sulpho-carbolate of soda, might be advantageously administered alternately with the iron mixture.

To a child of two years of age three grains of the chlorate of potassa, five grains of the sulphite of soda, or three grains of the sulpho-carbolate of soda, may be given every two or three hours.

Salicylic acid is another remedy which I have thought had a very beneficial effect. My usual prescription of this is salicylic acid, one dram, one ounce of alcohol, and three ounces of water; to a child of one year old a teaspoonful of this mixture in a little sweetened water may be given every three hours. This mixture has a good local action as well as being a very excellent anti-toxemic. Where there is great debility, or in cases presenting signs of embolism, thrombosis or heart clot, carbonate of ammonia in sweetened gum water will be found a suitable remedy. Cubebs, copaiba, and senega have all been recommended, but I confess I have little confidence in any of them.

In the employment of local remedies there is still a great diversity of opinion; escharotics, caustics and styptics, formerly so generally recommended, are now for the most part dispensed with. In my humble opinion, the mineral acids, nitrate of silver, acid nitrate of mercury, phenic acid, etc., are very doubtful remedies.

As local applications I prefer the tincture of the perchloride of iron, permanganate of potassa, lactic acid, saccharate of lime and chloral hydrate.

To destroy the diphtheritic exudation, and prevent its future development, the inhalation of the vapor of unslaked lime is a most valuable remedy. The patient may be covered with a blanket, and a vessel containing the lime and boiling water placed close to the patient and covered with the blanket, so that the lime vapor may be freely inhaled; this course persevered in will act most successfully. I have wit-

nessed a large number of cases completely relieved by this treatment, which, prior to its employment, were apparently dying from apnea and asphyxia.

For many facts and statistics enunciated I am indebted to the writings of Condie, Flint, Smith, Meiggs and Pepper, and many others in this country; and Johnston, Jenner, Briscoe, Watson, and especially to the most excellent monograph of Professor Morrell McKenzie, of England; also to many articles in the current medical journals from French and German writers.

1316 Olive St.

DIPHTHERIA—ETIOLOGY AND TREATMENT.

By J. W. Hawkins.

[*Read before the Lewis County Medical Society.*]

HOWEVER much we may theorize about the causation of diphtheria, we are forced to the conclusion that our knowledge is still indefinite. Fortunately, however, the pathology of the disease is well enough understood to found upon it a rational system of treatment. We do know that it is a specific form of disease; that it is epidemic, and to a limited extent contagious. That it is as contagious as smallpox or measles my experience denies. I have never yet carried the disease from one person to another, and I have treated the complaint at intervals occurring nearly every year during a period of nearly twenty years.

That it is contagious or infectious by contact with the exhalations from the body, I think the experience of physicians at the bed-side will fully establish. The particles of matter, the seeds or spores coming in contact with the skin or mucous membranes, find a lodgment in these tissues, germinate, and a specific morbid action is set up, not only locally, but throughout the entire organism. The nutritive

functions suffer; the organs of assimilation and respiration flag in the performance of their respective functions; the blood loses its normal constituents, and the whole system is soon in a state of general debility. This morbid condition continues a variable length of time, usually from eight to fourteen days, before the disease is fully manifested. About this time morbid growths make their appearance, usually in the throat, but often upon the skin or any part of the mucous membranes.

These diphtheritic deposits I believe to be a peculiar species of fungus, subsisting by imbibing the juices impregnated with the peculiar principles of the matrix on which they exist, and are merely a sign of the depraved condition of the tissues and fluids of the body that affords them their peculiar form of life—life that can only be sustained at the expense of the tissues and fluids in a partial state of disorganization or decomposition; a restoration of the normal functions of the organs of nutrition and respiration at once puts an end to the life of the fungus, which appears only as the outgrowth or spawn of a disease to which the absorption of its spores originally gave birth. Whether this view of the etiology of diphtheria be the true one or not, it at least affords me, in the absence of any other, a foundation on which to predicate a theory of treatment, which has been eminently successful.

When we know the cause of a disease we generally understand how to apply the remedy, and by avoiding the cause avoid a repetition of the disease. But with regard to the disorder in question, owing to the very minute and subtle nature of the cause, and our want of knowledge of the peculiar conditions that favor its germination, we find ourselves entirely in the dark as to how we may avoid the disease; but if we are right as to the cause of the ailment, we can rationally at least apply remedial measures.

The symptoms of diphtheria are so well known that I will not occupy space or time in enumerating them. I will, therefore, proceed at once to lay before you the treatment I have adopted and depend upon.

The indications to be met are, first, if there is not already vomiting and purging, to give a teaspoonful of the flowers of sulphur, which should be repeated every three hours until the offensive accumulations are carried off. After this the next and most important indication is, without any regard to the existing fever, to begin with such constitutional remedies as will most effectually obviate the characteristic debility that so constantly attends the disorder.

To do this there are no remedies known to me that are so constantly attended with successful results as the sulphate of quinia and the soluble citrate of iron.

These may be combined or given separately. A convenient way of administering these medicines to children, and at the same time I think the best way, is:

℞.—Sulph. quiniæ,	- - - -	ʒj
Ferri citrat.,	- - - - -	grs. xx
Aquæ desti.,	- - - - -	ʒijss

M. S. Teaspoonful every three hours. This for a child three years of age answers the purpose very well, and should be kept up in severe cases day and night until the disease is subdued. After this a dose of the mixture daily for two or three weeks will be necessary to prevent a relapse. The iron alone will often answer this purpose. For adults or children large enough to swallow a pill, the ferri et quiniæ citratis may be made into a two grain pill and alternated with the foregoing mixture. This preparation of iron I believe to be superior in this disease to any other salt of iron, and should never be exchanged for the tinct. ferri chloridi. In addition to the quinia and iron, small doses of potassa chlorate, two grains every three hours, may be given. This will be useful in supplying the blood with oxygen. Local remedies are useful in cleansing the throat and destroying the fungous formations. For this purpose one or two applications of the solid stick of silver nitrate, followed with a gargle compound of two drams of potassa chlorate dissolved in a glassful of water, or diluted sulphu-

ric acid. If the parts have a ragged appearance, and are disposed to bleed, Monsel's solution of iron is the best remedy.

Externally the throat should be frequently bathed with salt and water, especially early in the attack. A useful liniment is composed of a dram of sulphur and four ounces of turpentine, and should be frequently applied, especially during the last stage of the disease.

This course of treatment, with some trifling variations, I have found almost uniformly successful.

ANNUAL ADDRESS.

By P. G. Hooper, M. D., First Vice-President.

Delivered before the American Medical Association at St. Paul, Minn., June 6, 1882.

GENTLEMEN of the American Medical Association—A letter received some weeks ago from our distinguished President, Dr. J. J. Woodward, conveyed to me the sad intelligence that he would be unable to meet with us on this occasion by reason of physical infirmity. In foreign lands he seeks to repair his health, wasted by arduous labor and exhausting vigils, and rebuild his frame, shattered by a harassing accident. We all feel a keen disappointment in the absence of one so eminent, whose gifted intellect and matured experience have been acknowledged and appreciated, not only by those who have been intimately associated with him in the army, but by all who have enjoyed his fascinating society, or possessed a share of his warm friendship. May the airs he has sought bring healing on their wings, and speedily return him to the welcoming shores of his native land, completely restored to the full measure of a man's strength and vigor.

By reason of this unexpected and regretted absence, I find myself called upon, as First Vice-President, to preside over your deliberations. It is not surprising, if with

much diffidence I enter upon these delicate duties under circumstances of accident, and address you from this place, where was to stand one selected for his great attainments, his peculiar fitness, and his well-earned distinction. But when I reflect upon the past and remember the willing assistance you have always given your presiding officers—the moderation and refinement of your manners, the freedom from confusion and coarseness of your debates, and the harmony and good feeling which have characterized your proceedings, I take heart, and enter upon my work, if not with entire confidence, yet with hope of modest success, strengthened by the belief that in this happily unprecedented condition you will accord me even more than your accustomed courtesy and forbearance. When we consider the luster of the names of those who have heretofore filled this most honorable position, one may well feel distrust of his powers. When I recall the illustrious names[1] of my predecessors in office, I cannot but feel I follow at a long distance.

But, as has been aptly said by one of our number, who was himself no "lesser light," "there is consolation to be derived from the fact that all true pictures are made up of lights and shades, and that the latter only aid in developing the beauty and excellency of the former. It is in this respect that the background of the picture may be regarded as performing a subordinate though an essential part of the representation."

With your assistance, then, to which I confidently appeal,

[1] Chapman, of Pennsylvania; Stevens, of New York; Warren, of Massachusetts; Mussey, of Ohio; Moultrie, of South Carolina; Wellford, of Virginia; Knight, of Connecticut; Parsons, of Rhode Island; Pope, of Missouri; Wood, of Pennsylvania; Pitcher, of Michigan; Eve, of Tennessee; Lindsley, of District of Columbia: Miller, of Kentucky; Ives, of Connecticut; Jewell, of Pennsylvania; March, of New York; Davis, of Illinois; Storer, of Massachusetts; Askew, of Delaware; Gross, of Pennsylvania; Baldwin, of Alabama; Mendenhall, of Ohio; Stillè, of Pennsylvania; Yandell, of Kentucky; Logan, of California; Toner, of District of Columbia; Bowling, of Tennessee; Sims, of New York; Bowditch, of Massachusetts; Richardson, of Louisiana; Parvin, of Indiana; Sayre, of New York; and Hodgen, of Missouri.

I will strive to so give direction to our proceedings that every member may have opportunity for full expression of his views, and every subject receive fair and impartial consideration.

My first pleasant duty is to express to the medical profession, and to the citizens of this beautiful city of the great Northwest, our grateful acknowledgment for the cordial reception extended to us through the chairman of the committee of arrangements. Strangers as most of us are to your citizens and your country, we assure you that we have been impressed with your graceful hospitality, and will carry with us at our departure many pleasing recollections of your beautiful scenery, delightful climate, and charming society.

To-day, gentlemen, we commence the 33d annual meeting of this association. A generation of mortals have been born, lived, and passed away, since the meeting of the convention which recommended the formation of this body. Most of those great spirits who inaugurated this enterprise, and gave form and substance to the ideas there entertained, can mingle with us no more forever. A few upon whom "age sits with decent grace" still remain, revered for their wisdom and experience. And among these *facile princeps* is he[1] to whom more than to any other one individual we are indebted for our permanent foundation, and without mention of whose name there could be no appropriate reference to our beginnings.

We have reached a natural resting-place where we can pause and look back and take account of our journeying and our progress. The years of the existence of this association have been years of wonderful activity in mental and moral speculation and thought. The bounds of the horizon of investigation have been stretched out. The fierce light of truth has disclosed the harmless nature of many a veiled superstition. Much, regarded for centuries as but the dream of philosophers, has proven reality. Pre-

[1] N. S. Davis.

dictions never supposed to be aught but theories have been verified. The chains and bolts of formalism have been broken, and the devotees of science have pushed their explorations with audacious courage in every direction.

Invention and discovery have been stimulated to an extraordinary degree. We not only travel with swift safety over the land and the sea, but we gather our crops and convert them into commercial articles by steam. We pack electricity in boxes like children's toys, and have it ready to light a town or cook a meal, or drive a sewing machine. We drive through mountain ranges and under seas, and connect oceans with artificial streams, through which may float the commerce of the world. There is no feat of storied genii but what is every day performed for us. And always becoming clearer and brighter is the interaction between natural and moral philosophy, contemplated centuries ago in the rapt vision of the immortal Newton.

Powerful incentive to this activity and labor is the appreciation and reward of the worker. How different from the treatment accorded the great father of experimental philosophy. His wonderful works were derided, misunderstood, satirized during his lifetime, and long after. His sovereign said of his greatest work, it was like the peace of God—it passeth all understanding. One of the first scholars of his age said of it: "A fool could not have written such a work, and a wise man would not."

And he, himself, standing confidently upon the great endeavor of his life, said proudly, but mournfully: "Of the perfecting of this I have cast away all hopes; but in future ages, perhaps, the design may bud again."

Now, every thinker and discoverer has a fit audience and substantial recognition—common schools, free libraries, public lectures, cheap newspapers and periodicals, and books are educating the peoples continually. The skepticism of the age is not afraid of the new and startling. Tendencies are to prove all things, and hold fast to that which is certain. Prophets are not without honor,

even in their own country. The cry of Sir Thomas Bodley to Bacon, "a fresh creating new principles of sciences would be, to be dispossessed of the learning we have," is not heeded. Withal, there is no recklessness or immaturity in statement of theory or discovery. It has been said that genius is patience. Certainly patience has characterized these later investigators. Whatever the subject, all forces and all knowledge are summoned to their aid. The testimonies of the rocks, the sky, the sea, the buried city, the exhumed remains of animals, are brought to prove their propositions. We are told that Darwin waited thirty years from the time of his first conception of the thought of natural selection before he published the matured "Descent of Man." Buckle spent a whole life-time of toil and unwearying labor to accumulate material for a hypothesis which is but shadowed in an Introduction. The thousand uses to which steam and electricity and water are being put every day are the results of countless experiments and untiring perseverance. The utter devotion which science demands of her followers has been rendered, and in return their voices have been listened to; disciples have gathered around them; rewards have been given in unlimited measure. All theories have not been accepted unchallenged, but controversy has been enlightened and tolerant.

In this life-time of a generation of men, which has also been the life-time of this association, what has been accomplished under its influence, amid all this restlessness and activity and earnestness? The purposes of the organization, as expressed at the preliminary convention, were to cultivate and advance medical knowledge; to elevate the standard of medical education; and to promote the usefulness, honor and interests of the medical profession. It is a source of congratulation that a spirit of harmony and friendship has characterized its annual assemblings, and cordiality and good feeling existed among its members. The interests of medical science have been uppermost in your minds; and a feeling of common brotherhood has

bound you in a bond of sympathy. This is peculiarly an institution of the profession, by the profession, and for the profession. It is truly democratic in its workings; its doors stand wide open to the worthy, and, by its laws, every reputable physician in the land can be heard, either in person or by representative, upon all questions within the objects for which it was founded.

Have the hopes indulged in at its inauguration been fulfilled? If we listen to some carpers, who speak disparagingly of our efforts and progress, or to the murmured disappointment of others, who expected too much at once, our reply would be despondent. But I rejoice to say such is not the feeling, nor the voice, of the profession generally. It may be granted that everything aimed at has not been accomplished; but certain it is, the association has been an active and powerful agent in disseminating useful medical knowledge; and no similar institution has ever been more successful in carrying out its chief object—the promotion of science. It was appreciated at the time that the work undertaken was difficult, and would require time, labor, sacrifice and united effort to accomplish. There was no organization. But few medical societies were in existence, and their influence was slightly felt. Each society or community of physicians was a law unto itself; there was no medical code acknowledged as binding and to which all could appeal. The medical literature of the country was in its infancy; there were comparatively few professional works, and of these scarcely any were by home authors. The medical mind was conservative, inert, slothful. This association arose, and a new order of things obtained. An eager desire for promised improvement and reform was awakened. State and county and city societies were formed in every state in the Union. The annual meetings of this body have increased in importance and usefulness until the American Medical Association occupies an advanced position, not only among philosophical associations, but also among the deliberative assemblies of the world.

The subject which has engaged most of your time and attention has been that of medical education and reforms in medical teachings; one well worthy of all the talent, and thought, and energy devoted to it by some of the ablest and most erudite scholars of the age. No language is too strong to express its importance to the profession and the well-being of society; no iteration too frequent to spur on endeavor in this cause. The reports of committees as published in our annual proceedings must convince every one of the great consequence of effort in this matter. Much has been accomplished. Medical schools have been founded, and the curriculum of studies extended, the standard for admission to the profession raised. Finally, to put into effect the many devised and conflicting views, offered year after year without any practical result, the idea of the American Medical Association was adopted, and its subsequent organization effected as the best supposed means of carrying into operation the wishes and objects of this association. It may be that association has not done everything anticipated by its most sanguine advocates; but it cannot be denied that, through this instrumentality, many and important changes calculated to advance and elevate medical education have been made. Experience and experiment will give increasing assurance of its value; its certain success is only a question of time.

But, going beyond this vexed question of education, much has been done for science. The thirty-two ponderous volumes of your transactions speak for themselves, containing contributions from many of your ——— thousand members, representing the medical faculty of every state and territory, which have attracted attention and stimulated thought, both in this country and abroad.

I am satisfied that a brief enumeration of the valuable additions to our literature during the last ten years, as culled from these books, would astonish even those who have been regular attendants at our meetings. Want of time and the limited scope of this address will preclude me

from more particularly directing your attention to the many original essays, monographs and reports that can be read with interest and profit by the profession. All through these luminous pages are the evidences that our members have been imbued with the spirit of curious inquisitiveness which characterizes our times, and have made signal additions to the great mass of facts and knowledge which every day is enabling us to dispel some shadow or lay bare some mystery. You have made certain your standing in that great army whose mission is to combat and conquer disease, and improve the condition of man, and whose power is increasing every day. And, in my opinion, no body of scientists in the world has done more in this direction and in the worth of their contributions to medical literature. It is also reasonable to believe that these assemblies, with their interchanges of thought and imposition of duties through sections and committees, have been powerful stimulants to the production of original works.

The establishment of a medical journal in lieu of the present annual volume of transactions has been brought to your attention so frequently, and the subject was so ably presented by your honored President[1] at the meeting held in New York, that it seems a work of supererogation to mention it so soon again, especially as the report of the committee, read at our last meeting, was so convincing that further argument in its favor seems wholly superfluous. I sincerely hope the able committee which now has the matter in charge will see their way clear to an earnest, unanimous and persuading recommendation for adoption at this meeting.

To this association belongs the honor of introducing to the attention of the people of the different states the importance of sanitary laws. That your efforts have been in a great measure successful is evidenced by the popular appreciation of sanitary organizations. Legislatures are now directing their attention to the framing of laws bearing

[1] L. A. Sayre.

upon questions of hygiene and state medicine as to one of their legitimate and necessary subjects for regulation; and boards of health for states, cities and hamlets are increasing on every hand. The establishment of a National Board of Health was a natural result from the repeated and persistent recommendations and the urgent demands of this body, speaking, as was seemly, with the voice of authority. Whilst referring to this matter of sanitation, there is one important subject deserving your most serious attention. That terrible scourge, the small-pox, has recently been declared by the National Board of Health an epidemic in this country. The deaths from this malady are comparatively enormous, and there should be no occasion for this great mortality. Vaccination and re-vaccination, duly performed and under proper conditions, are considered nearly a certain prophylactic. The people as well as the profession have been neglectful in this matter. Many who admit the advisability are criminally careless; and others, from ignorance and superstition, refuse to take advantage of this preventive. Some way should be arrived at whereby the lives of the masses of the people may be protected from the deluded or obstinate individuals who neglect this great boon for saving human life. If possible, provision should be made by law for universal vaccination. It may be argued that compulsory vaccination would be an infringement of human rights. But this position is untenable. Governments are established and laws enacted for the protection and happiness of the greatest number of the people. The liberty and free action of the individual should be interfered with as little as possible. But something of natural right must be given up to the state; some restrictions must be placed upon all. Some trades can be carried on only in certain places and in certain manners. Property rights have to be violated for the common weal. Houses are blown up to save disastrous conflagrations. Trade is impeded, and commerce delayed by quarantine laws. The yellow flag of pestilence and the cross mark of danger are exhibited in infected neighbor-

hoods, and the inhabitants confined to those quarters. The compulsory education to a certain standard is conceded to be proper in the freest, most liberalized and most enlightened countries. The principle seems firmly established that it is the duty of the state, in its efforts towards the highest civilization, to pass laws whose object is to stay disease, to prolong human life, to prevent recurrence of those plagues and pestilences which have their seat and growth among barbarous nations, and to cultivate within reasonable limits the mental nature of the subject.

At various times the attention of physicians has been called to the propriety of efforts for the relief of their medical brethren, disabled and helpless, and especially for assistance to the widows and children of those of them who, after lives of sacrifice and exposure and danger, die, leaving no legacy to their families but the sweet-smelling record of their unselfish lives. We see the contrast around us in the establishment of aid societies by other professions, and in the numerous benevolent societies, notices of which daily crowd our newspapers. Without amplifying the subject, it seems to me that a deliverance upon it, setting forth its advantages and devising a common scheme for operation, might be the means of accomplishing much good and removing an ever-present anxiety from the life of many a struggling brother.

We have a code of medical ethics, the best ever given for the government of medical men, of acknowledged force and effect, of universal acceptance in every state of the Union; and it is now too late for any single physician or state society to oppose or set at defiance the moral power of this body. Had the association done nothing else than to originate and adopt these beautiful precepts, which should govern in our relations to each other, our patients and the public, it would have done a service entitling it to everlasting gratitude and to an imperishable name in the annals of our country. There has recently been exhibited, by a few, a disposition to be restive under the operation of certain portions of the code. It may not

perhaps be becoming in me to discuss this matter here, as it will be for judicial investigation and decision; but I may be permitted to suggest that we should not retreat from our well chosen lines of defence. One mistaken movement would involve us in a whirl of inconsistencies, tending to place us in a false attitude, and bring dishonor upon the profession. The broad lines of demarcation between the irregular and the true physician should never be obliterated. Our association stands prominently forth in its high purposes, and its means of accomplishing these purposes are distinctly enunciated.

In the discussion of all ethical questions a spirit of liberalism has always mingled with a never-sleeping sense of imperative obligation to the established truths of science, of order, of law. I do not say that the time may never come, for there is no perfect work of mortal hands, when your organic laws will require modification and amendment, but until the time does arrive, when the impulse of the great heart of the profession shall be felt, and radical changes be demanded in the light of a perfected knowledge, let us maintain without internal strife the unsullied standard of professional honor and morals, now "full high advanced" in our midst, and decline association with those who will not recognize that flag, or who, having once recognized, have abandoned it. We should without reservation declare the perpetuity of this association, and renew our vows of fidelity to its constitution and laws.

Of the thirty-three distinguished members of the profession who have occupied the honored position of President of this Association only thirteen now survive. But a few days ago he who immediately preceded me in the performance of these offices was suddenly called by the stern messenger whose summons brooks no refusal. At his post of duty, at the noon of his day's labor, with but a moment's warning, he was bidden to lay down his tools and leave his unfinished work for other hands. In the fullness of his honor and his fame was he stricken. Of his beautiful char-

acter as a citizen, a husband, a father, a friend, it may here be spoken. But ill would this hour be filled if we did not pause to point to the brilliant career of Hodgen as worthy of emulation and imitation. Of solid attainments, quick perception, clear judgment and an energy remarkably above all his fellows, his place was assured among the eminent men of his time. Of him it can be truly said that he was endowed with—

> "the king becoming graces,
> "As justice, verity, temperance, stableness,
> "Devotion, patience, courage, fortitude."

These rapidly thinning ranks remind us that we too, who form the link between the founders of the Association and the younger members of the profession, must soon yield our places; and it behooves those who are to follow us to reflect that in a short time the burdens and cares necessary to sustain the honor, usefulness and dignity of the profession will rest on their shoulders. The permanent withdrawal of only a very few of our experienced and revered veterans would entail a sad and serious loss upon us personally, but would be almost irreparable to the legislative and judicial administration of our affairs. Our younger brethren, some of whom are meeting with us for the first time, will pardon me then if I urge them to enter upon these responsibilities with a zeal and determination equal to that of those highly cultivated and brilliant men who were present at the birth of this society, and who have maintained its character untarnished up to its present vigorous manhood.

I have attempted, by reference at least, to direct your attention, gentlemen, to our present condition, our relation to science, and our duties. If anything I have said may appear presumptuous, you will charitably impute the blame to an earnest desire for the successful accomplishment of the aims of this Association, and a jealous regard for its honor and good name; believing, as I do, if we go forward in the future as the noble men before us have gone,

in the quest of truth, with earnest seeking and unselfish devotion, we will be of good in our day and generation, and fitly perform the work found to our hands to do.

History and Statistics of Ovariotomy.—The chapter on this subject in the "System of Gynecology by American Authors," which is now in preparation, has been assigned to Dr. J. E. Janvrin, 191 Madison Ave., New York. In order to make the statistics of any great value, it is essential that those who have made any ovariotomies should coöperate with the author and furnish him the necessary data.

We cordially second his request that all who have operated or who know of unreported cases will communicate with Dr. Janvrin promptly. All reports should be sent in before Sept. 1. Blanks, with lists of questions to be answered, will be sent to any address on application as above.

The questions to be answered are as follows:

1. Name of Operator?
2. Age of Patient?
3. Nationality?
4. Married or single?
5. Aspiration or previous tapping?
6. Duration of growth?
7. Laparotomy or vaginal operation?
8. Condition of patient at time of operation?
9. Were antiseptic precautions used?
10. Was the spray used?
11. Long or short incision?
12. Adhesions or other complications?
13. Double or single ovariotomy?
14. Pathological features of cyst?
15. Treatment of the pedicle?
16. With or without drainage?
17. Duration of operation?
18. Complicated or uncomplicated history after operation?
19. Anti-pyretics used, if any?
20. Result. Cause of death, if any?
21. Primary or secondary operation?

CASES FROM PRACTICE.

A CASE OF HYDROPHOBIA.

BY L. J. MATTHEWS, M. D., CARTHAGE, MO.

Trousseau, in a clinical lecture, once said: "I know of nothing, gentlemen, more painful to hear, or more fatiguing to read, than a lengthy medical case overloaded with details; and yet details should not be neglected when they relate to a complaint which you will rarely have an opportunity of observing. A complete case, rather than a long dogmatical treatise, leaves on the mind an impression which time cannot blot out, especially when you have been an eye-witness of the chief phenomena of the disease."

Having recently had a case that one rarely sees—one, too, which has made a lasting impression upon my mind—I have deemed it of sufficient importance to report it; and while I do not wish to "overload it with details," so as to make it "painful to hear or fatiguing to read," yet I shall endeavor, as clearly and briefly as possible, to give a correct history of the case, together with the symptoms which occurred during the progress of the disease.

A little girl, five years of age, was on the 18th of March last bitten by a dog. At that time there had been nothing to indicate that rabies existed among the dogs of our city; and although the father of the child killed the dog, yet he did not seem to have any apprehension in regard to the result of the injury. The child's wounds were dressed by the father, and the next day he brought her to me. I found a wound three-fourths of an inch in length on left side of lower lip, extending nearly through it, and a slight abrasion on right side of nose, made by the teeth of the dog. The wound of the nose had been covered by adhesive plaster, and the edges of the wound on lower lip had been drawn together with strips of the same. I re-

moved the plaster, cleansed the wounds, and dressed them with plaster, applying absorbent cotton to the wound of lower lip. The child was not brought back again, but I learned that the wounds soon healed. On the morning of April 19th the father of the little girl informed me that she had caught cold, had some fever, and if she was not better by evening he would have me call and see her. About 8 P. M. of the same day he came to my office and requested me to call at his house and examine her, as she seemed to be no better. I learned that she had complained of feeling unwell the night before, although she had been playing around as usual during the day. She had not rested well during the preceding night, and in the morning was feverish, complained of her throat, and, they informed me, she had some sickness at her stomach, with occasional efforts at vomiting. I found upon examination that she had fever, a very rapid pulse, and rather an anxious appearance of countenance. They thought she had caught cold on the 17th, being out in the open air, which was raw and chilly—the exposure being more than usual for her on that day. She had cold extremities at the beginning of her fever, and her parents thought she had a dumb chill. I examined her throat, but could detect only a slight redness of the pharynx and fauces. I ordered a mercurial purge, and at the same time prescribed bromide of potassium and tincture of aconite, to be given every two hours during the night. I called to see her the next morning, and found that she had had frequent attacks of vomiting, as they thought, following always upon trying to take the medicine. She had been exceedingly nervous, and had not closed her eyes during the entire night. Her bowels had acted freely about morning, and as her pulse had become slower, and she seemed to have a slight remission in her fever, her parents thought she was better. I found her extremely nervous, her eyes bright, and with a very anxious expression of countenance. Her pulse had become very irregular, and sometimes intermitted. They said she could not lie down, and as a consequence she had been held in a sitting position on the lap of one or the other of the parents during the entire night.

I requested them to lay her down on a lounge so that I could examine her chest more easily; and when she was placed upon it she went into a clonic convulsion. Immediately upon being

restored to an upright position she became quiet. I could not upon examination of chest find any trouble with lungs, and only noticed the tumultuous action of the heart—irregular, as before stated—and was at a loss to know the source of dyspnea, which came on whenever the child assumed anything like a recumbent position.

Although the parents claimed that the child had an irritable stomach, and had thrown up the medicine, yet I had not witnessed the trouble myself. I concluded to give her some digitalis, and prescribed some of the tincture in water, and gave a dose. This at once cleared up the mystery which had surrounded the case. The child threw her head back, straightened herself out, and taking the medicine made an effort at swallowing. This produced spasm of the pharyngeal muscles, and the medicine was forcibly ejected from her mouth. I asked if that was the way she had been vomiting the day before and during the night, and they informed me that it was. I at once took in the situation, and was convinced in my own mind that the case was a genuine hydrophobia.

I at once called to my assistance Dr. Brook. He saw the little sufferer soon afterwards. The child seemed afraid of him—to dread an examination, although she had previously known him well, and had often been played with and petted by him. Whenever he was asked to examine her, or would make a movement as if he were intending to do so, the child would be at once thrown into a spasm.

It has been asserted that one suffering from hydrophobia can readily swallow other fluids than water, as broths, milk, etc. Upon a trial, however, I found such not to be the case, as she rejected milk as quickly as water, the spasm excited by the effort being equally as severe. Intense thirst is supposed to be always present in these cases; yet I found that the child had never asked for water, and during the whole progress of the disease she never indicated that she desired to drink.

Dr. B. saw the case at 9 A. M., and after this the child would be thrown into clonic spasms whenever she was moved or any thing touched her. I succeeded in getting her to swallow a mixture containing morphia, bromide of potassium and chloral, and for some time after she seemed to grow more quiet.

Saw the case again at 12:15 P. M., and the parents thought

she was better, having had spasms less often after having taken the mixture just mentioned.

Having been called to the country, I did not see her again until 2½ P. M. I was told that soon after leaving she had grown worse; she would again have spasms whenever moved or touched, and for a considerable time the father could not keep her upon his lap. She would slide off upon the floor, and it was impossible for any one to keep her in one position for any length of time. Now when not in a spasm she continually picked at her clitoris; a terrible irritation in these parts seemed to be present. The respiratory muscles now became so intensely involved in the general convulsive movements as to impede respiration; hence the eyes, which before were bright and glistening, now became dull and bloodshot. Her countenance during a convulsion became livid, the lips purplish, and the scar, which before had presented no unusual appearance, now looked like a dark, livid streak on the lower lip.

It has been stated that after the wounds resulting from the bite of a rabid animal have perfectly healed, and the victim is attacked with hydrophobia, they often take on an unusual appearance, opening up and ulcerating, and that they become the seat of painful and strange sensations.

That this statement is true I am convinced, for in this case not two hours before death she would insist that her mother should put over the wound strips of adhesive plaster, and tie it up, as had been the custom at the time she had received the injury, claiming that it was bleeding, or going to bleed, and that it was opening up again.

At this time the child commenced frothing at the mouth. Mucus would accumulate in the throat and air passages, and real vomiting supervened. She would throw up large quantities of dark-colored mucus, seemingly caused by an admixture of venous blood with the mucus. Her pulse now became very rapid, small and weak. Her extremities became cool, and a cold perspiration would occasionally break out upon her forehead. I had another physician called, Dr. B. being absent; and while he was being sent for I gave the child some chloroform by inhalation. This produced such an effect as to enable the parents to place the child upon a lounge, where she was kept until she died. When the doctor arrived he suggested

that a new preparation, the xanthium spinosum, had been recommended as a specific in hydrophobia, and advised a trial of it, I gave a dose, and am certain that she swallowed a portion of it. She was now more quiet, grew partially unconscious, and only had slight convulsions at short intervals when making an effort to vomit. One hour after the first dose I had the child's head raised to give a second. At a request to open her mouth she did so, but made no effort to swallow. Her head dropped to one side, her heart ceased pulsating, her breathing stopped, and by the time her head reached the pillow she was dead. I think she died from spasm or paralysis of the heart—from paralysis most likely. It is claimed that these cases die from asphyxia. This case I am satisfied did not. Although delirious at times, an hour or so before death, and although occasionally she would appear to strike as though mad, yet in the main her mind was clear, and when aroused she knew everything that was transpiring up to the last moments of her life.

She was bitten by the dog on the 18th of March; first complained of feeling unwell on the evening of April 18th, just one month from the date of injury; had fever and pharyngeal spasms on the 19th; convulsions commenced on the morning of the 20th, which continued until four P. M., at which time she died. The period of incubation was just one month. The duration of the attack forty-four hours.

This case settles beyond question the fact that hydrophobia is an infectious disease, produced by the introduction into the system of a virus from a rabid animal, and uninfluenced in its production by any mental state or condition of the person in whom the disease is developed. The age of the child, her ignorance of the disease, and her inability to comprehend the gravity of the injury which she had sustained, is proof positive and convincing of the falsity of the position taken by some, that hydrophobia is brought on in consequence of mental anxiety and dread, or fear of the possibility of disease.

Whatever factor the imagination may form in the production of some diseases, surely in this disease it can have no influence. As to the origin of rabies in animals, of course it is held by nearly every one that it does not develop spontaneously, but that it is produced by inoculation from some rabid animal.

In this instance it is impossible, however, to trace the disease back any farther than to the dog which committed the assault upon the child. No knowledge of rabid animals having existed in the neighborhood or vicinity is had, and if the dog had suffered from the bite of a rabid animal the fact has not been ascertained. Nothing peculiar in the conduct of the dog had been noticed by the owner up to the time the child was bitten, although after this it was stated that for a day or two it had been snapping at the children of its owner.

The child was a bright, playful one, and belonged to the owner of the cemetery. The dog was owned by the person employed in taking care of it. The child often went to the cemetery and played with the dog; and in this instance the dog commenced, as usual, to play with the child, running and jumping up on it, and only after it had been struck by the child did it seek to retaliate by biting it. This fact shows conclusively that there is a time in the history of the disease in the animal when it is impossible to tell from casual observation when it is in a condition to commit so fearful an injury. These considerations tions show the gravity of the mistake made by the father of the child in the management after she had been bitten. If he had at once sucked the wound, which bled very freely, and then had it cauterized thoroughly, it is highly probable that the virus would have never found entrance into the system, and thus the life of the child would have been saved. The rule in all cases should be to cauterize at once, and do it thoroughly, even though you are not certain the dog is rabid. Whether a thorough cauterization the next day would have been productive of any good I am not prepared to say, although I am now sorry I did not do so.

The treatment of hydrophobia, so far as I know, consists simply in mitigating the distressing symptoms always found present in such cases, and in easing as much as possible the pains from which the victim suffers. So far as medicine is concerned, administered with a view of curing the disease, it is generally conceded that nothing can be done. Two cases only has been reported as cured. These were treated by the hypodermic injections of curara—one in this country and one abroad. The fact of the utter failure of all other remedies which have been resorted to in the treatment of undoubted cases, and the

uniformly fatal termination of this disease, leaves one to doubt seriously whether the two reported cases treated successfully by curara were genuine cases of hydrophobia.

I have not entered into a discussion of the probable origin of hydrophobia—its pathology, its symptomatology, or its peculiar manifestations in the lower order of animals—for the reason that much that is written upon the subject is purely speculative, and not practical, and for the further reason that what has been settled with reference to definite knowledge of the disease is as well known to yourselves as to me.

I report the case, hoping it may teach us a most important lesson, and that is the necessity of treating the bite of a dog in such a way as to neutralize or destroy, if possible, the virus of rabies, in all cases in which there is a possibility of such a virus being present, and this can only be done at the time of the injury, and by a thorough cauterization of the parts so injured.

CASES IN MIDWIFERY.

BY E. L. FEEHAN, M. D., ST. LOUIS.

HEAD AND FOOT PRESENTATIONS.

A paper on head and foot presentations in the January number of the *Obstetrical Journal*, by Professor Landis, of Starling Medical College, and another short paper in the April number of the same journal by Professor Atwater, of the University of Vermont, relating a case of the same presentation, tempt me to give my experience. This complication is so rare that it occurred but once in an aggregate of about 50,000 cases. Most authors do not mention it at all, and those who do notice it generally content themselves with giving some vague directions as to its management. Cazeaux gives two cases—one in his own practice, in which the face presented there was a contracted pelvis, and craniotomy was resorted to, after failure by version and forceps. In the other case, also a face presentation, the woman died undelivered. Dr. Landis had three cases—two complicated by placenta previa, children delivered by craniotomy; in the third case, the child presumably alive, delivery

was accomplished in the same way. In Dr. Atwater's case the child was dead when he was called in, and was delivered by forceps.

My case was as follows: I was called at midnight, Feb. 3d, 1882, to Mrs. H———, No. — S. 16th Street; multipara at full term. There was a midwife in attendance. Examined, and found some coils of pulsating funis in vagina, a left foot at os uteri, and a little higher up the head, forehead presenting, chin to left sacro-iliac junction, waters recently discharged, os about half dilated and dilatable, roomy pelvis. I placed patient in knee-elbow position, and endeavored to restore the foot, but could not succeed, so I turned and delivered, without unusual difficulty. The child was partly asphyxiated, but did very well after a while, and the mother made a good recovery.

Some years ago I had a case of foot and head presentation in hospital practice, but at that time my attention was not particularly called to the rarity of those cases, so I only remember that I got away a live child. Cazeaux and Hodge recommend in such emergencies, first, to push up the foot; this failing, version, then forceps, and finally craniotomy. Dr. Landis amends this by giving the third place to perforation; and Dr. Atwater amends his amendment by recommending forceps after failure by version, because of the strong repugnance the friends have to the mutilation of the child, and to save himself from the risk of being charged with malpractice. If I might venture a suggestion, it would be that forceps be given a trial after failure to push up the foot, except, of course, in cases like Cazeaux' or mine, where the face presented, though Cazeaux' had the additional complication of a narrow conjugate. It gives the child, if alive, a better chance for its life, and if dead, we know the difficulties (very great sometimes) and risks of version. Besides, it is as easy to deliver by forceps with a good-sized pelvis, as by craniotomy.

Abnormalities.

Prof. Landis quotes the old proverb, "It never rains but it pours." 'Tis odd how very often it is verified in obstetrical practice. Some eight or ten years ago I had, within a short time, two cases of excess of development (double monsters, specimens now in museum of St. Louis Medical College), and

two of defective development, an acranial monster, and a case of double harelip and absence of forearm. As another instance, for about six months of hospital and private practice, the cord was around the neck of the child in three-fourths of my cases. And still another instance: For three or four months past, in nearly all my cases, the children have been delivered by the breech, either as an original presentation, or by version. Some few of these may be of interest.

Labor Complicated with a Large Fibroid Tumor.

Jan. 17th. Mrs. M———, Channing Avenue. This is a case which I may give more in detail at another time. For the present I may mention that I saw her in consultation two years ago, in her first confinement. She had been in slow labor three or four days: waters discharged forty-eight hours; fetal heart inaudible; vaginal discharges slightly fetid; os size of a half dollar and rigid, owing evidently to a very perceptible thickening of the uterine wall on left side, commencing at about internal os. The gentleman in attendance agreed with me in recommending a warm vaginal douche, and a good dose of chlorate hydrate. After three or four hours we found our patient in better condition, and the os dilated sufficiently for the application of the forceps, with which I extracted a dead fetus. When called to the second confinement, I found a much more formidable condition of things than on the former occasion. The thickening of the uterine wall had grown to be a large subperitoneal tumor, filling half the pelvis, very sensitive to the touch, and pushing the os to the right side, almost out of reach of the finger on first examination. Under chloroform, administered by Dr. Coles, who was kind enough to see the case with me, I was able to push the tumor out of the pelvis and turn. Mother and child did well. I examined this patient a month after confinement, and found the tumor very much diminished in size as involution progressed, and more globular.

Placenta Previa—Forceps—Version.

I was summoned, hurriedly, a few weeks ago, by one of our most intelligent midwives to Mrs. S———, Clark Av.; second pregnancy, at full term. The midwife had just come there and found a case of placenta previa, with profuse hemorrhage. On

examination, the os was about half dilated, the partially detached placenta covering three-fourths of its circumference, head presenting. I sent for liq. ferri persulphat., with the intention of injecting the dilute solution on the bleeding surface, but the flow was so alarming while waiting for the messenger, that I tried forceps. Owing, however, to the position of the head, the placenta partially filling the cervix, I could not apply them quickly, so I turned and delivered easily; but notwithstanding all the customary expedients, and though the heart continued acting slowly for half an hour or more, there was no effort at respiration. The body of the womb was contracted firmly, but there was a free hemorrhage from the placental site, which I endeavored to check with a hot douche, unsuccessfully. It was controlled by a tampon wet with the iron solution applied to the cavity of the cervix.

Early Vitality of Fetus.

Amongst the odd cases was one which I saw some years ago with a young physician. He was alarmed by a profuse flow, and sent for me. While examining the cloths around the patient I found a living fetus of not more than six or seven weeks. There was a perceptible pulsation for thirty or forty minutes. Of course this is nothing remarkable to a physician; but we can imagine the astonishment and horror of an intelligent woman, who has an abortion produced, flattering herself with the belief that there is no life in her offspring until quickening takes place, at beholding the living pulsating fruit of her womb from a six weeks' pregnancy.

2129 Pine Street.

The Toner Medical Library.—Dr. Joseph Meredith Toner has given to the United States, for permanent preservation in the library of Congress, his entire collection of books, pamphlets and periodicals, between 20,000 and 25,000 volumes. This includes the most valuable collection of American medical publications to be found anywhere. Dr. Toner has devoted much time and money to the gathering of this library, and proposes to continue adding to it during his life, and to create a fund to still further increase it after his death. The gift has been accepted by Congress, with suitable provision for its care and preservation.

EDITORIAL.

EXCISION AND INTRAVENOUS AUTO-INOCULATION OF THE SYPHILITIC CHANCRE.

A few years ago excision of the chancre with its indurated base, and the extirpation of the associated lymphatic glands if possible, when they are involved, was suggested and practiced as a means of preventing constitutional infection. According to Dr. P. Aubert, Surgeon-in-Chief of l'Antiquaille, this practice has gained little credit and secured few partisans in France, but in Germany has received the endorsement of the profession generally, as modifying, if not preventing, the constitutional manifestations of syphilis. Another view which has been suggested is that after excision the subject, who was not sufficiently impregnated with the virus to be *infected*, is sufficiently so to be *vaccinated* or protected against new infection.

This surgeon has written a paper in the *Lyon Médical* of April 2, to which we would call attention in connection with our editorial in the April COURIER, relating the result of some experiments with reference to the transmission of venereal diseases to animals.

With reference to the question how much dependence can be placed upon excision of the chancre as a means of protection, he thinks that the known facts are not yet sufficiently numerous to warrant a conclusion, though recently recorded observations seem to show that it cannot at all be counted upon when the ganglia have become involved. His own experiments in this regard are too recent to afford any demonstration, though he calls attention to one point that may be of some value. In cases where the ganglia are affected and it seemed inexpedient or impracticable to extirpate them, he has endeavored to inject

once or oftener into each ganglion some of the peptonate of mercury; the theory being that if the chancre is to be considered a center for the elaboration of the virus, the ganglion is a secondary center, or at least a point of entrance, and it is rational to follow it there.

These experiments also, he thinks, are too recent to be correctly estimated; and he frankly admits that he shall not be at all surprised to find that the disease appears in patients so treated without material modification; but in view of the serious nature of syphilitic disease he thinks all measures, in themselves harmless, that afford any hope of averting or modifying the disease should be fairly tested.

Pasteur's observations with reference to chicken cholera and charbon, and the more recent studies and experiments of M. Galtier with regard to hydrophobia, have led Dr. Aubert to suggest the possibility that a protection against syphilitic infection *may* be found in the injection directly into the veins of a patient who has a chancre of a little of the virus and blood collected upon the chancrous surface. He observes that by this operation no new virus is introduced into the system; and thinks that well substantiated facts of the preservation, or vaccination, of a mother by the syphilitic infant which must be effected by the intermediation of the circulation, would lead to the admission that the theory is at least plausible that a very small quantity of syphilitic virus injected into the veins may preserve from syphilis.

Dr. Aubert believes that the way having been opened by Pasteur for the discovery of modes of vaccination for various virulent diseases, and successful methods having been discovered for some of them, it is only a question of time when efficient protection against syphilis can be guaranteed; and that it is in the conditions which he has suggested that experiments can be legitimately commenced.

The observations of M. Galtier, above referred to, are cer-

tainly very striking. In a large number of animals (dogs and sheep), M. Galtier made intravenous injections of the virus of rabies. Some time after this injection he inoculated the virus under the skin and it never produced rabies, while this disease was always produced upon test animals who had received no previous intravenous injection.

Secondly. He injected the virus of rabies under the skin of two sheep and a dog; then, twenty-four hours afterwards, he made an intravenous injection into each animal. Rabies was not developed in either of these animals, while it was developed in test animals who had received the virus only by inoculation under the skin.

BOOK REVIEWS AND NOTICES.

FIRST AID TO THE INJURED. By PETER SHEPHERD, M. B. Revised and Added to at the Request of the First Aid to the Injured Association of New York. By BOWDITCH MORTON, M. D. *New York: G. P. Putnam's Sons.* 1882. 16 mo.; square; pp. 88; cloth, 50 cents.

Relatively too much space (more than one-third of the whole) is given to "Anatomical and Physiological Outlines.

Several articles are mentioned as "the most common patent disinfectants" which are almost unknown in this country. Directions for restoring the apparently drowned are given in two different parts of the volume. They should be given together, or better yet, the author should select the one most easy of application and give that alone.

While the volume might have been improved in the directions suggested above, it is a useful little volume to place in the hands of non-professional readers, and contains information that will enable them to render efficient aid to those injured or taken suddenly ill, until competent professional assistance can be secured.

FOURTH BIENNIAL REPORT OF THE STATE BOARD OF HEALTH OF MARYLAND. January, 1882.

Besides the usual vital statistics of the city of Baltimore and

an account of the work of the State Board of Health, this report contains a good deal of well digested matter of interest to all sanitarians. There are also a number of brief papers containing directions regarding the prevention of infectious diseases, the "Michigan method" of restoring the apparently drowned, the proper management of infants and small children.

Dr. Chancellor, the Secretary of the Board, has shown himself to be an admirable editor in the preparation of the report as well as an excellent sanitarian in the papers which he himself contributes to it.

Illustrated Quarterly of Medicine and Surgery. Edited by Geo. Henry Fox, M. D., and Frederic R. Sturgis, M. D.

This new quarterly enters upon a field of medical journalism hitherto entirely unoccupied. The character of the illustrations in the numbers thus far issued is of the very best. Chromo-lithographs, photographs and engravings are used according as one or the other is best adapted to the subject represented.

The intention is to publish in each number four quarto plates printed on fine quality of card-board, 10x12 inches, with twenty-four or more quarto pages of letter-press descriptive of the cases represented in the plates, and with additional wood-cuts when necessary. This promises to be the most elegant specimen of medical journalism in the world, and will be a luxury that we would recommend to any thriving practitioner who desires to make himself a handsome present.

The Physician Himself, and what he should add to the strictly scientific. By D. W. Cathell, M. D., etc. *Baltimore: Cushings & Bailey.* 1882. 8vo.; pp. 194; cloth, $1.25.

Dr. Cathell has embodied in this little volume a great many valuable suggestions to young men entering upon the practice of medicine, and some who have already had some years of professional experience might read it with profit. The style is pleasant, and the advice with reference to various minutiæ of personal habits and many other points upon which success depends, as much perhaps as upon professional skill, is judicious and clearly expressed. The book is worthy of a careful perusal.

TRANSLATIONS.

TWENTY-SEVEN UNARMED TENIA (TENIA LATA) IN THE SAME INDIVIDUAL.

BY M. RICHARD, MEDECIN-MAJOR A L'HOPITAL MILITAIRE DE PHILIPPEVILLE, FRANCE.

A French workman, 34 years old, an old foot-soldier, worked several months in the neighborhood of El Mlila, on the railroad from Constantine to Batna, when, last spring, he commenced to pass with his stools links of tenia; soon these links became more numerous, and often also in the intervals between the passage of stools there escaped from him some that were endued with quite active movements. This condition lasted for seven months, during which he continued to work without experiencing any serious derangement in his general health; neither emaciation nor boulimia, enteritis nor epileptic attacks; sometimes obscuration of the visual field and a confused sensation in the stomach. On several occasions there were extremely violent colics, so that the patient rolled upon the ground. One month before his entrance into my service at the hospital of Philippeville, X. felt some uneasiness, vague disturbances, which he referred to malarial fever, as one never fails to do in Algeria for affections most unlike and which have no relation with malaria.

Ordinary treatment. Rigid diet during the day, with 45 grams (one and a half ounces) of castor oil in the evening. The next morning at the hour of visit 60 grams (two ounces) of decoction of pomegranate root, and two hours later another ounce of castor oil. Between noon and one o'clock, X. passed at one time an enormous bundle of tenia, so tangled together that it was almost impossible to separate a single one without breaking it. The mass, carefully dried, weighed 720 grams (24.6 oz.). The fragments, placed end to end, measured

70 meters in length, and I counted 27 heads of unarmed tenia; the four air-holes being distinctly visible, especially to a myopic eye and examined with a lens, left no doubt as to the accuracy of this number, any more than as to the kind of tenia.

Except the case of Gervais and Van Benedin, who saw forty-one tenia in one individual, never to my knowledge has so large a number been found as in the case just reported. There is reason to believe that none remain, for in the three weeks which have followed the treatment not a single new ring has passed; moreover, the pomegranate root is an almost infallible teniafuge in the cases where animated fragments with active movement expelled in the intervals between stools indicate the presence of unarmed tenia, which is much the most common in the province of Constantine. An apparently very insignificant precaution has, nevertheless, the greatest influence upon the success of the treatment; it is necessary not to wait more than two or two and a half hours after the administration of the decoction of pomegranate before giving the second dose of oil. The teniafuges, in fact, do not kill the worms; they only intoxicate them; this is so true that they are always found alive in the dejections. It is necessary, then, to profit by the moment when they are only loosely attached to the mucous membrane, in order to sweep them away with a purgative.—*L' Union Méd.*, Jan. 8, '82.

SYPHILIS OF THE HEART.

By Prof. B. Leissier.

Marguerite T., aged 27, prostitute, had had venereal and syphilitic manifestations at different times. In 1875 she was treated at l'Antiquaille for a blenorrhagia, a vaginitis and an erosion of the cervix of the uterus; In November and December, 1879, for an ulceration of the right tonsil, mucous patches upon the anterior pillars of the fauces, the velum palati, and an erosion of the posterior border of the tongue.

She was quite well and strong, having only at times a little shortness of breath during long walks, and especially in ascending.

She was addicted to frequent alcoholic excesses, often drank absinthe, and was addicted to the excessive use of tobacco. During 1880 and 1881 she frequently underwent sanitary inspection, without any trace of syphilitic disease being discovered. On the very evening of the day on which she died she had undergone such an examination. After this visit she went to dine with some of her companions, and a few minutes after this meal she experienced pains in the region of the stomach and in the belly. The pains went on increasing and became complicated with oppression and smothering. The patient, feeling herself stifling, had a physician called, who recognized the symptoms of asystolia, and advised to take her to the hospital. She reached there in a state of asphyxia and died in a few hours afterwards, without it being possible to determine the exact cause of death.

The autopsy was made with the utmost care by Prof. Cobrat, of whose detailed report of the examination the following is a summary:

Aside from a marked edema of both lungs, lesions were found only in the heart and kidneys. The pericardium enclosed a small quantity of brownish liquor, but both of the serous layers were healthy.

The heart was neither hypertrophied nor overloaded with fat. The left ventricle contained some post-mortem clots. Upon the endocardium there was a little fibrinous exudation below the sigmoid valves of the aorta. The endocardium was white, yellowish and thickened, especially upon the septum and upon the posterior surface. The mitral orifice was quite normal; the aortic valves presented little vegetations, but the orifice was not contracted.

In the right ventricle, which was not dilated, was likewise found that whitish and thickened endocardium. The alteration was more marked than in the left heart. The anterior flap of the tricuspid valve was enveloped by a fibrous thickened layer analogous to the albuginea. The orifices of the right heart were normal. These lesions of the endocardium seemed not to have caused a great difficulty in the circulation. It was not so with the alterations of the heart muscle.

The walls of the right ventricle, and especially the interventricular septum, were profoundly modified. The anterior wall

of the right ventricle is of a grayish white; its consistence is increased. It creaks under the scalpel. It is transformed into sclerous tissue. On section, little masses of a milky white color are found of the size of a lentil, prominent by their color upon the grayish wall. These same nuclei were found upon the posterior wall of the right ventricle, and especially upon the septum. They were six to seven millimeters in diameter, presenting a cheesy appearance, without any trace of softening at the centre. They were intimately adherent to the tissues about and cannot be enucleated. They made no projection into the cavities of the heart, but the endocardium which covers them was very thick. The aorta was neither dilated nor atheromatous.

Histological examination discovered diffuse lesions of the cellular tissue, of the vessels, of the muscular fibers, and of the endocardium.

In the cellular tissue an infiltration of lymphoid cells, sometimes so abundant as to mask the vessels and compress the cardiac fibers as they separate. In the parts most affected, the connective tissue spaces were enlarged, the muscular fibers greatly atrophied; in some places, indeed, only fibrous tissue was found, the muscular fibers having entirely disappeared.

The lesion of the arteries was characterized by a periarteritis, which at some points was accompanied by a thickening of the internal coat. The muscular fibers were atrophied; their alteration appeared to be purely passive. There was found neither division of the nuclei nor accumulation of cells in their interior, but the diameter of their fibers is diminished, and, in some points, indeed, they have entirely disappeared. The endocardium presented alteration only in the points where its color was white and where it was thickened. Its thickening was due to the accumulation of white globules in the spaces of the connective tissue.

In the caseous masses an embryonal center and a peripheric layer was easily recognized. This was composed almost exclusively of embryonic cells. As the center was approached, the cells became granular, and the nuclei disappeared. In the central region only a granular detritus was seen. In most of these caseous masses could be perceived a net-work of refracting fibers, which appeared to result from the degeneration of the

cardiac muscular fibers. The caseous masses had a variable size. Some were as fine as tubercular granulations, but still one could recognize a caseous center and an embryonal periphery. The presence of giant cells could not be determined.

In conclusion, these little new-formations resemble what has been described by Wagner under the name of syphiloma, and by M. Malarsiz under the name of syphilitic nodules. They approach in all points the lesions of syphilitic orchitis; the caseous masses were nothing but gummata.

The surface of the kidneys was irregular; their tissue appeared retracted. On section, there were found fibrous tracts which enveloped the pyramids, and appeared, on drawing upon the surface of the organ, to be the cause of the little sinuses which were found.

The observation of our patient is like the cases published by Ricord, Lebert, Virchow, Lancereaux, and proves that there exist syphilitic endocarditis, an interstitial myocarditis, and a gummy transformation. These lesions which we have met cannot be confounded with tuberculous alterations, nor with sarcomatous alterations. Syphilis alone can explain them.—*Lyon Méd.*, May 14, '82.

THS ORIGIN OF HOSPITALS.—We do not know why Mr. Huxley is interested in the origin of hospitals, or what they have to do with zoology. He has, however, been investigating the subject, and announces, with a kind of "hoop-la," that hospitals are not Christian institutions, but were first established by the Esculapian priests. This may be a new thing to zoologists, but it can hardly be so to any one having the slightest acquaintance with the origin of medical science. In the descriptions of the temples of Esculapius they are always referred to as a kind of hospital. They were not hospitals according to the modern or Christian idea, however, since faith was more than works in therapeutics, and payment in some form was expected. These institutions died out finally, and then hospitals were established by Christian Europe, being then entirely new things, neither modelled after nor suggested by the Esculapian temples.—*N. Y. Med. Rec.*, May 6, '82.

REPORTS ON PROGRESS.

MEDICINE AND THERAPEUTICS.

Borax in Erysipelas.—F. H. ATKINS has for eight years made a practice of treating erysipelas by the local application of borax dissolved in glycerine, one dram to an ounce, which is to be well rubbed in and applied on linen. The result has been to cut the disease short apparently in a few hours. In some cases he used tincture of iron internally, in some not.—*Phil. Med. Times*, Mar. 25, '82.

Case of Endocarditis in Gonorrheal Rheumatism.—PROF. W. H. DRAPER presented to the class at the New York Hospital a patient, 19 years of age, a car driver, with a good family record, a moderate drinker, and giving no history of syphilis or malarial disease. He had a urethral discharge, which had persisted for over a year. Four months previous to the time when brought before the class he had an attack, supposedly of rheumatism, in the calf of the left leg, of transient duration, and not very severe. When admitted he had pain in one finger of the left hand, due to the strain upon the fingers in driving restless horses. He had no cough, but complained of pain in the precordium and shortness of breath. Physical examination showed enlargement and dilatation of the left ventricle, with mitral insufficiency. Further examination showed the presence of embolism of the right anterior tibial artery. As the disease continued, other emboli formed, producing characteristic symptoms in the different parts, whose nutrition was affected by the plugging of the arteries. The case terminated fatally, and the post-mortem confirmed the diagnosis of embolism, consequent upon the detachment of vegetations from the valves of the heart, which was the seat of inflammatory alterations.—*Med. Bulletin*, Apr., '82.

Bromism in an Asthmatic Subject.—A. M. CARTLEDGE reports the case of a man, 40 years old, who, six weeks before his

first visit, had been rather suddenly attacked with asthma. The physician who had attended him gave him "a great many large powders," one of which he was to take every three hours. The patient persevered with this treatment for almost three weeks, but derived no appreciable benefit from it. His wife noticed that then his memory began to fail, and he slept less than was his wont. Still continuing to take the medicine, his memory grew progressively worse, so that he could not even complete a sentence that he would commence. His general health depreciated; his appetite was poor, and sleep interrupted and restless; he would sleep for a half hour and then stagger around the room for a while until persuaded to return to bed again, when the same thing would soon be repeated. He could not concentrate his thoughts upon any subject; his ideas were incoherent; he seemed to have dim recollections of past events, and could ineffectually revert to them when spoken to on the subject; yet when he attempted to express his recollection in words all became confusion, and his utmost efforts seemed only to confuse him all the more, until gradually the thought was displaced, and he resumed his customary placidity.

An examination of the powders proved them to consist of ten grain doses of potassium bromide. These were stopped—a draught composed of tincture of lobelia and wine of ipecac was given to relieve the asthmatic symptoms, and morphia in $\frac{1}{4}$ grain doses for the insomnia. In about three weeks the patient was restored to a natural state of health.—*Med. Herald,* May, '82.

Typhoid Fever and Diphtheria.—ANDREW KEY asserts that there are very strong connections between these two diseases. He relates a case where an outbreak of diphtheria was traced to contamination of water from sewage, which in the same location had been the source of seven outbreaks of typhoid fever in twenty years. During the latter part of the epidemic he had occasion to treat diphtheria and typhoid fever in the same house. He cites another case where diphtheria, terminating fatally in three instances, was directly traced to contamination of cistern-water by sewer-gas from an untrapped overflow pipe. Several other similar instances are given. Dr.

Key notes the further resemblance in this, that the two diseases are essentially confined to childhood and the prime of life, and that they are both apt to be most fatal in the middle and upper classes of society. He holds that neither disease is infectious, as are scarlet fever, small-pox, etc., but both are due to water contaminated with excreta, and that by proper attention to water supply and drainage these diseases may be kept out of our families.—*Edinb. Med. Jour.,* May, '82.

Amyl Nitrite in Tetanus.—G. H. W. Ross reports the case of a sailor admitted to the Royal Infirmary, Glasgow, Scotland, suffering from traumatic tetanus, supervening upon an injury received in a drunken brawl three weeks previous. The symptoms first occurred in the morning, and at evening the tetanic convulsions were almost constant. Soothing applications were made to the wound, which was red and angry. A cathartic was administered. The tincture of calabar bean was given in 20 drop doses every three hours, for fifteen hours, without any effect in diminishing their frequency or severity. Nitrite of amyl was then tried in eight drop doses by inhalation at the commencement of the paroxysms. These were almost instantly aborted, and rapidly diminished in severity until they ceased entirely. Dr. Ross raises the question whether the known power of amyl nitrite to cause a determination of blood to the brain, taken in connection with its effective action in the control of tetanic symptoms, may not throw some light upon the true causation of the disease.—*Mich. Med. News.* March 25, '82.

Oil of Turpentine.—Ordinary sulphuric ether has the property of modifying the persistently unpleasant flavor of oil of turpentine. The following mixture has been found very beneficial in vesical catarrh, neuralgia and sciatica:

℞.—Ol. terebinth, - - - - - ʒij
Ether sulphur, - - : - - ʒi

Mix by shaking violently, and add:

Syr. aurant. flor., - - - - - ℥i
Aquæ, - - - - - - - - - ℥iv

M. S. Teaspoonful every two hours.—*Druggists' Circular,* June, '82.

Prevention of Nausea, following the Use of Morphia.—DR. STEUART reported the case of a patient who, though always nauseated by morphia alone, found no unpleasant effect from taking it combined with gentian.—DR. ELLIS uses bismuth to prevent nausea.—DR. DICKSON combines quinia with the morphia.—*M'd Med. Jour.*, May 1, '82.

Enlarged Spleen and Liver from Malarial Disease in a Child Aged 20 Months.—JOHN M. KEATING presented to the College of Physicians of Philadelphia, April 5, 1882, a liver weighing 19 oz., and a spleen weighing 14 oz., which had been removed, post-mortem, from a child aged 20 months. The history of the case was as follows: When the child was one year old, in July, '81, the mother went to Wilmington, Del., to live. The locality was swampy, and everyone suffered from intermittent fever. The paroxysms were often accompanied by violent headaches, which compelled her to apply ice to her head, and at times she was delirious. The attacks came daily for several days at a time, commencing at four o'clock P. M. She nursed the child until its death. About two weeks after the mother was first affected the child began to fail, and exhibited the same symptoms as the mother. The attacks commenced about four o'clock P. M. The ears became cold, finger-nails blue; there was vomiting, followed frequently by loose stools of a green color, and containing a great deal of mucus. At times there was constipation, followed by chalky stools. No convulsions; no strabismus. Child always nursed well; mother always had an abundance of milk. Three months later she came to the Philadelphia Hospital. Malarial cachexia was marked in both mother and infant. Large doses of quinia and iron, followed by cod liver oil, effected rapid improvement of the mother's condition. Microscopic examination of milk discovered nothing abnormal.

The infant's abdomen was found to be much enlarged, especially upon the left side. This was due to an enlarged spleen, which extended down to the crest of the ilium, its anterior edge terminating in a ridge about an inch to the left of the umbilicus. The liver was also enlarged, and the intestines distended with gas. Every effort was made by constitutional and local treatment to reduce the liver and spleen to their normal size, and there was a perceptible diminution in the size of the

spleen. The malarial attacks were checked by suppositories of quinine, but tonics and judicious diet had little effect upon its nutrition, and March 5th, after five months' treatment in the hospital, the child died.—*Cinc. Lancet and Clinic*, Apr. 22, '82.

Subclavicular Tympanism.—M. J. Granger gives the following conclusions as the result of a careful study of subclavicular tympanism in relation with the other physical signs:

1st. Subclavicular tympanism may coincide with an augmentation of the vocal vibrations, and an augmentation of the respiration. This association of physical signs indicates that the upper lobe is healthy; that it is resonant; that it vibrates, and that it breathes supplementarily. This is a special case of a general law, which is the law of supplementing.

2d. Subclavicular tympanism again may be accompanied with an augmentation of vocal vibrations, but there exists at the same time an abnormal respiration. This is the most common of all the forms of tympanism. All the abnormalities of respiration described by authors may be observed, but the most frequent form is the feeble respiration. This combination may be called the tympanism of congestion, for it indicates purely and simply a congestive state of the apex. This congestive state is most commonly, but not always, of tubercular origin; its true nature should be deduced from further observation of the patient, from study of the antecedents and functional symptoms which he presents.

3d. Subclavicular tympanism may occur with a diminution of the respiratory murmur and a diminution of the vibrations. This third combination, much more rare than the preceding, probably corresponds to various pathological states. I have found it thus far caused by compression of the bronchi and by edema of the lungs.—*L'Union Méd.*, Apr. 4, '82.

SURGERY.

Cyst of Fibula.—Excision.—J. W. Buchanan operated upon a lad twelve years old for a large oval tumor on the outer side of right leg, extending from fibular articulation downwards for about six inches, and measuring from its inner

side to the middle of the leg behind over its most prominent part, eight inches. On the inner side a slight furrow separated it from the tibia, but behind it could not be distinctly defined. It was immovably fixed, smooth, uniform in outline, hard on palpation, with here and there a spot which gave a semi-elastic sensation with egg-shell crackle on firm pressure. The skin was freely movable over it. There was no pain nor tenderness to pressure, nor was walking interfered with.

He stated that falling from a tree a year before he had bruised his right leg below the knee. Hot fomentations had caused speedy relief of all painful symptoms, but there had remained a slight thickening of the tissues. A second injury upon the same part had been similarly treated, and had resulted in a similar manner, except that the thickening had been more marked. After a time this swelling gradually increased, then more rapidly, and more lately had remained stationary. As the indications seemed to be that the growth was malignant in nature, amputation was determined upon, and the patient was chloroformed for that purpose. However, upon cutting down upon the tumor it was found to be a cyst, and Dr. Buchanan simply excised the upper half of the fibula. The patient recovered entirely.—*Glasgow Med. Jour.*, May, 1882.

Successful Sponge Grafting.—NORMAN PORRELT reports a successful case of sponge grafting in a boy 14 years of age, who had suffered an injury to his right cheek by falling against the edge of a rapidly revolving drum in the mill where he was employed. When the slough caused by this injury separated there was left a granulating cavity four inches long and two wide. This cavity was filled with a slice of sponge, carefully prepared according to Dr. Hamilton's directions (vid. COURIER, Jan., '82). A piece of protective silk covered this, and the whole was kept in place by strips of plaster. Two thicknesses of boracic lint, some wadding and a bandage completed the dressing. This was removed, and the wound was irrigated daily. The sponge became closely adherent to the granulating surface in one day, and in a week the granulations had grown well into it. The progress to recovery was rapid and uninterrupted.—*Edinb. Med. Jour.*, May, 1882.

Remarkable Recovery after Injury to the Head.—JOHN DRYS

DALE attended a man who had received a frightful injury from a circular saw. The wound in the scalp was six inches in length, extending diagonally from a point about two inches in front of the right ear to a point about the same distance behind the left. In the skull was a gap three and one-half inches in length by one-fourth inch in width, and extending through into the cranial cavity. Feeling sure that the case must terminate fatally, the doctor drew the edges of the wound together with three strips of adhesive plaster and covered the whole with a strip of lint soaked in tincture of benzoin comp., and ordered him to be carried home. However, after a little time he rallied and insisted upon walking home, lest he should alarm his wife. He was ordered rest in bed and a farinaceous diet. There were no unpleasant symptoms and no suppuration, and accordingly the dressing was left undisturbed for twenty-four days, when the bandage was removed. Two days later the plasters and lint dropped off of themselves. The wound was perfectly cicatrized, leaving, of course, a deep gap in the skull.—*Austral. Med. Jour.*, Feb., '82.

Glycerine to Prevent Scars.—J. B. C. GUZZO finds glycerine most valuable in preventing scars in burns. He uses it diluted with an equal quantity of water or pure, according to the nature of the burn. Or he uses a combination of one part of glycerine with three parts of collodion.—*Gaillard's Med. Jour.*, March, '82.

Sulphide of Calcium as an Antisuppurative.—DR. ANDREW H. SMITH, Chairman of the Committee on Restoratives of the Therapeutical Society of New York, furnishes to the "New York Medical Journal and Obstetrical Review" for June, 1882, a report of the committee on the use of sulphide of calcium for the purpose of preventing or diminishing suppuration. After giving the experience of several members of the society, Dr. Smith concludes his report as follows: Judging from this limited number of cases, it would seem that we are warranted in concluding that in many cases of suppurative affections, ranging from the small pustules of acne to extensive suppurating surfaces, an appreciable, and often a very marked, benefit is derived from the use of the calcium sulphide, suppuration

which would otherwise take place being averted, or the quantity and duration of an existing discharge being lessened. At the same time its action is not uniform; and in many apparently favorable cases it will fail entirely. The drug is somewhat prone to irritate the stomach, and this circumstance affords an indication for small doses frequently repeated instead of larger ones at long intervals. One-tenth of a grain every two hours in acute cases will generally secure the full therapeutical action of the drug, but larger doses may sometimes be required, and some patients will bear well a grain three or four times a day. Even in small doses the sulphide will occasionally produce headache, and the patient is usually more or less annoyed by eructation of sulphuretted hydrogen.—*N. Y. Med. Jour. and Obst. Rev.*, June, 1882.

Pyrogallic Acid in Phagedenic Chancroids.—M. VIDAL employs pyrogallic acid in the treatment of phagedenic sores in his wards. Two or three applications of the acid are found to be sufficient to arrest the extension of the disease. In some cases auto-inoculation was tried after this treatment had been employed for only two days, and the negative result seemed to demonstrate that the secretion of the sore had already lost its specific virulence. The application of the acid blackens the wound and causes also an induration, which might cause it to be mistaken for the initial lesion of syphilis, if this action of the acid were not known.

The acid is applied in the form of an ointment or as a powder diluted with starch ($\frac{1}{4}$), according to circumstances. Morning and evening dressings for two days are generally sufficient to restore healthy action.—*Jour. de Méd. et de Chirug. Prat.*, May, 1882.

Sub-Carbonate of Iron in Ulcers.—M. VIDAL has employed with advantage the sub-carbonate of iron in the treatment of ulcers. First, the ulcers are washed with a decoction of walnut leaves, then a layer of carbonate of iron is applied, and the dressing is completed by covering the part with a poultice. The dressing is applied twice a day. It is easily applied, inexpensive, and seems to be very efficient.—*Jour. de Méd. et de Chirug. Prat.*, May, '82.

SOCIETY PROCEEDINGS.

AMERICAN MEDICAL ASSOCIATION.

The thirty-third annual meeting of the American Medical Association was held at St. Paul, Minn., June 6, 7, 8 and 9, 1882.

The delegates having assembled in the Opera House, Dr. Alex. J. Stone, of St. Paul, Chairman of the Committee of Arrangements, called them to order at 11 A. M., and prayer was offered by Rev. Jno. Ireland.

Addresses of welcome were then made by Dr. Stone and Gen. L. F. Hubbard, Governor of Minnesota.

Protests were then read by the secretary from several state and other medical societies against the admission of the delegates from the New York State Medical Society. These were referred to the judicial council. Letters were also read from Drs. L. A. Sayre and S. D. Gross, emphatically disapproving the course of the New York State Society with reference to the code of ethics. Dr. Sayre's letter was addressed to the secretary of the New York society, declining to accept credentials from that society and act as a delegate, because, in his opinion, the action of the state society being in direct violation of the code of ethics which has been adopted by the American Medical Association, would necessitate the rejection of its candidates by the latter. Dr. Gross expressed regrets at his inability to be present at this meeting; and characterized the action of the New York State Medical Society as "an outrage which every member of the profession should consider a deep personal insult, and which the association should rebuke in the most stern and uncompromising manner."

Inasmuch as the President of the Association, Dr. J. J. Woodward, was prevented by ill health from being present, being detained in Europe, the duties of that office devolved upon the first Vice-President, Dr. P. O. Hooper, of Arkansas, who discharged the onerous duties to the satisfaction of the

association and his own great credit. His address we give on page 31.

A letter from Dr. Woodward was then read, thanking the association for the honor conferred upon him, and expressing his sincere regrets at being unable to be present. A cable dispatch was sent to Dr. Woodward, expressing regrets for his absence, and hopes for his speedy restoration to health.

Dr. N. S. Davis presented a petition from the Woman's National Christian Temperance Union, requesting an expression of approbation of the introduction into public schools of more perfect study of physiology and hygiene, and instruction as to the effect of intoxicating drinks. By the request of Dr. Davis, this petition was referred to the section on State Medicine and Jurisprudence.

On Wednesday, the second day, the association was called to order at 10 A. M.

The Vice-President then announced the Committee on Nominations.

A resolution to provide for the payment of traveling and hotel expenses of the treasurer while in attendance on the association was then adopted.

Dr. Denison, of Colorado, then offered a resolution deprecating and condemning the use of the term "allopath" to designate regular practitioners. This was referred to the judicial council.

Dr. J. H. Packard, of Philadelphia, then read the report of the Committee on Journalizing the Transactions. This was ordered printed, and made the special order for Thursday morning.

Dr. J. A. Octerlony, of Louisville, then gave an address as chairman of the Section in Medicine. The address consisted in a *résumé* of the advancement made in some departments of the practice of medicine, and he claimed that more progress has been made in the last twenty-five years than in the preceding twenty-five hundred. He called attention to the far greater accuracy in diagnosis now than that which could be attained formerly. He noted the change in the views of pathologists with reference to the subject of inflammation, and the rapid strides that have been made and are still being made in the investigation of diseases of the nervous system. He also called

attention to the value of recent investigations with the microscope in regard to the causation of disease. He noted particularly that no work of any value has been done by any of the advocates of exclusive systems of practice.

The report of the Judicial Committee, which was then read by Dr. N. S. Davis, found nothing to condemn in the status of the Nebraska State Medical Society; and decided that the association should not adopt the resolution introduced last year with reference to the use of remedies controlled by a copyright or trade mark, inasmuch as that resolution includes matter not included in the code of ethics, and the code contains all that is necessary; and, thirdly, decided unanimously that the New York Medical Society is not entitled to representation by delegates in the American Medical Association, inasmuch as the code of ethics adopted by that society at its last annual meeting is in direct conflict with the code of ethics of this association.

Dr. H. O. Marcy, in his address as chairman of the Section on Obstetrics and Diseases of Women, discussed "Fibroid Tumors of the Uterus and their Treatment." Having referred to the original investigations made in this field by members of this association, Dr. Marcy spoke of the histological formation of these tumors, which he divides into three classes, according to their location, viz.: sub-serous, interstitial and sub-mucous. He discussed the differential diagnosis, and the complications that may arise in the course of their development. As regards treatment, he thinks little can be hoped from medication, though in the sub-mucous variety he had seen good results from the systematic use of ergot. The various modes of surgical treatment were then described. The doctor illustrated his paper by the means of micro-photographs thrown upon a screen by means of an oxy-hydrogen light.

Thursday morning, after the association had been called to order, prayer was offered by Rev. W. N. Gilbert.

The special order of the day was the consideration of the report of the Committee on Journalizing the Transactions:

The committee was of the opinion that it is idle to think of establishing a journal, unless the association can be made far more stable and comprehensive in its character than it has been so far, with a permanent membership, including a much

larger proportion of the profession throughout the country than it does at present. This would necessitate the adoption of such changes in the organization of the association as were proposed at the meeting last year, throwing open membership to all members of state and county societies upon application and payment of annual dues of five dollars, which should entitle such members to receive the journal for a year.

Common sense and the experience of the British Medical Association would indicate that, if the proper person could be found at once, the business affairs of the journal would most advantageously be placed entirely under his charge, but as this would be a matter of some difficulty, it would probably be best for the association to enter into a contract with some well-known and responsible publishing house to issue the journal for them, the editor and his assistants to be employed and paid under the direction of the association.

The committee called attention to the propriety of incorporating the association, in order to make it possible to effect such a contract.

In regard to the manner of electing the editor, the committee advise that this be left to a board of trustees nine in number, three to serve one year, three two years, and three three years; an annual election being held to supply the places made vacant by the expiration of the term of office. In the opinion of the committee, it would be well to make the appointment of the editor for an indefinite term, the engagement to be dissolved by either party only upon three months' notice; and if this is done by the trustees, the editor to have the right of appeal to the judicial council, upon whose motion, if they see proper, the matter may be brought before the association at its next annual meeting, and decided by a three-fourths vote of the members present.

They recommend that the editor appoint the assistant editors (subject to the approval of the trustees), and that the salary of the editor be $6,000, out of which sum he shall pay his assistants, making such terms with them as shall seem best. The place of publication should be as nearly central as possible, and would probably be best located at whatever point a suitable editor could be found. They propose as the name "The Journal of the American Medical Association."

Finally, to indicate the method of setting the enterprise on foot, the committee recommend the appointment at once of a board of trustees, who shall at once issue a circular to all the regular physicians in the United States, so far as may be. By the responses to this circular, which should set forth full particulars in regard to the plans and aims and advantages of the journal, they shall determine the expediency of entering upon such publication. If, for instance, 2,000 names shall be secured as subscribers within three months, it might be assumed that the profession are ready to receive and support the new journal.

The committee making this report consisted of Drs. John H. Packard, N. S. Davis, L. A. Sayre, J. S. Billings, B. Cole, W. B. Atkinson, R. S. Dunglison.

The following resolutions were offered by Dr. N. S. Davis, seconded by Dr. Brodie, and unanimously adopted by the Association:

Resolved, That the interests of the association would be promoted by the publication of its transactions in a weekly medical journal under its own control, instead of an annual volume, as heretofore, provided it could be done without involving pecuniary embarrassment or so far engrossing its funds as to prevent the annual encouragement of original investigations by its members.

Resolved, That so much of the report of the Committee on Publishing the Transactions as relates to the increase of membership of this association, by applications from members of the state and local societies, be, and the same is hereby approved.

Resolved, That so much of the report of the Committee on Journalizing the Transactions of the association as relates to the appointment of a board of trustees, nine in number, and their duties, be, and the same is hereby adopted, and that the president of the association now appoint a special committee of seven to recommend to this meeting of the association the names of nine members for election to constitute said board of trustees.

Resolved, That the board of trustees so appointed be requested to proceed as early as possible to arrange a plan of a medical journal, to be called the "Journal of the American Medical Association," and that they send circulars explaining such plan, and asking pledges of support by actual subscription, to the members of the medical profession throughout the whole country, and thereby ascertain as reliably as possible

what degree of support the proposed journal can have, as a basis of commencing its publication, and that said board also proceed to ascertain and agree upon the best method of publishing said journal, the best editorial services it can secure to take charge of the work, and the best place of its issue.

Resolved, That said board of trustees be, and are hereby instructed to retain, under all circumstances, in whatever plans or contracts it proposes to adopt, control over the use of the advertising, as well as all other pages of the journal that is proposed to be established, and that said board report in full at the next meeting of this association the plans upon which it has been able to agree, together with the response of the profession to its circulars asking active subscriptions to the proposed journal, and that the constitutional amendments prepared by Dr. Packard last year be continued upon the table until the report of the board of trustees is received and acted upon.

Resolved, That the treasurer of the association is hereby authorized to pay out of funds in the treasury the necessary expenses of the board of trustees in printing and distributing its circulars and in conducting its proper correspondence.

Resolved, That the Committee on Publication proceed to publish the transactions of the present meeting in a volume as heretofore, using all diligence to give it an early distribution to those entitled to receive it.

The election of officers was next in order, and resulted in the choice of Dr. Jno. L. Atlee, of Lancester, Pa., as President; Drs. Eugene Grissom, of Raleigh, N. C., A. J. Stone, of St. Paul, Minn., J. A. Octerlony, of Louisville, Ky., H. S. Orne, of Los Angelos, Cal., as Vice-Presidents; R. J. Dunglison, of Philadelphia, as Treasurer; C. H. A. Kleinschmidt, of Washington, D. C., as Librarian.

The meeting in 1883 is to be at Cleveland, O.

The Section on State Medicine reported through its chairman, Dr. A. L. Gihon, a resolution with reference to medical expert testimony, which, in our opinion, the association should have adopted, instead of laying it upon the table. The purport of the resolution was that the association deems it advisable and conducive to the ends of justice that medical men called as expert witnesses shall be subpenaed directly by the court, instead of being called by either side of a suit in litigation.

A resolution was adopted, indorsing and commending the proposition of the Surgeon-General of the Navy to establish at

Washington, in connection with the Bureau of Medicine and Surgery of the Navy, and in co-operation with the American Public Health Association and the American Medical Association, a national museum of hygiene, which shall exhibit the history and progress of sanitary science. The resolution also urged the appropriation by Congress of $10,000 for the establishment of such museum, etc.

A series of resolutions was also adopted deprecating the proposition of Congress to reduce the appropriation for the Army Medical Museum and Library from $10,000 to $5,000, and earnestly urging the restoration of the appropriation to the former amount. The action on this resolution was unanimous, and it was ordered to be printed and sent to every member of Congress and the heads of Departments.

Dr. J. M. Toner read the report of the Committee on Necrology, containing notices of the deaths of fifty-eight members of the association. The report of the Committee on Meteorological and Clinical Records was read by Dr. N. S. Davis. This gave in detail the work done in determining the relative proportion of ozone and other active oxidizing agents in the atmosphere in various localities. It was recommended that Prof. Long be engaged at a compensation of $500 to superintend the laboratory work during the coming year. This was adopted.

Dr. Byrd, of Quincy, Ill., delivered an address, as chairman of the Section on Surgery and Anatomy, taking as his subject "Excisions of the Intestinal Canal where bound with Peritoneum." The conclusions reached were as follows:

First.—Resections of the small intestine may be done to a considerable extent without interfering in any appreciable degree with digestion.

Second.—Practiced under suitable conditions the operation is to be considered perfectly legitimate.

Third.—The resection may be performed by bringing the divided ends directly into apposition and closing the abdominal wound, by forming an artificial anus. The second and third procedure expose to less subsequent danger.

Fourth.—Resections of fibrous and cicatricial structure, which are probably more frequent than is generally supposed, may cause a radical cure, and the same is the case with epithelioma. On the contrary, resection of cancerous obstructions gives only temporary relief, and at a greater risk.

Fifth.—By proper diet after the operation the risk of fecal extravasation may be reduced to a minimum, and the best diet for this purpose is one containing as little fluid as possible.

Sixth.—By introducing liquids per anum, and drink in the same way, water is absorbed as by the mouth, and there is no sense of thirst; the flow of intestinal fluids is considerably less and the patient is more comfortable.

Dr. A. L. Gihon, Chairman of the Section on State Medicine, in his address gave a summary of the responses received to the request for suggestions from physicians. He had sent out two circulars, to the first of which he received twelve responses, to the last twenty-five. He treated the association to some sarcastic comments upon the indifference manifested by the profession concerning State Medicine Dr. Gihon is a strong advocate of stringent quarantine to prevent diseases from being brought into the country. He reviewed pretty thoroughly the scope, organization and work of the several state boards of health, criticised the statistics supplied by the National Board of Health, on the ground of lack of reliability. He urged the importance of the securing of accurate health statistics. He closed his address by urging the importance of educating the people and their representatives to appreciate the real dangers to the public health, and suggested various methods for securing this result.

At the session on Friday, the matter of expert testimony came up again, and the following resolution, offered by Dr. Gihon, was adopted:

Resolved, That it is the sense of the American Medical Association that it will be conducive to justice and to the dignity of the profession, if medical expert testimony can be presented to the courts without the appearance of bias or influence from either side of a case, and simply as a straight-forward statement of scientific facts.

Quite an animated discussion was elicited by a resolution offered by Dr. J. G. Thomas, of Savannah, Ga., approving the organization of faculties in medicine having no other function than the examination for degrees, as a measure calculated to increase the value of present methods of medical education.

An honorarium of $1,000 was voted to the secretary of the

association, notwithstanding the attempt of Dr. Toner to have it reduced to $500. Dr. Toner then gave notice of an amendment to the constitution, to be acted on next year, making the office of secretary one to be filled annually by the association.

The following trustees were elected to serve three years: Drs. N. S. Davis, E. M. Moore, J. M. Toner; to serve two years, H. F. Campbell, J. H. Packard, L. Connor; to serve one year, P. O. Hooper, A. Garcelon, L. S. McMurty.

A resolution was adopted approving the calling of an International Commission to consider and agree upon some standard method of testing visual acuteness and color-blindness, and some requirement of these qualifications in the sailors of all countries.

With reference to the annual meetings of the association, the following resolution was adopted, on motion of Dr. Davis:

Resolved, That after the next annual meeting, the permanent interests and influence of this association would be best promoted by again holding every second meeting in Washington, D. C., as the home of the common National Congress, and not as the invited guests, and that each alternate meeting can be held in the section of the Union best intended to promote the interests of this association.

Dr. Keller gave notice of an amendment, allowing the holding of the meeting as late as the first Tuesday in September, if desirable.

Dr. D. H. Goodwillie, of New York, gave an address, as Chairman of the Section on Oral and Dental Surgery. He advocates the teaching of this specialty by established chairs in regular medical colleges. He narrated a number of interesting cases, illustrating the treatment of diseases of the mouth, and showed a variety of diagrams, instruments and wax models.

The following delegates to the British Medical Association were appointed by the President: Drs. T. Addis Emmet, Daniel Lewis, E. H. Brush, W. M. Carpenter, of New York, and J. M. DaCosta, of Pennsylvania.

The president-elect, Dr. J. L. Atlee, was then introduced to the association, and expressed his appreciation of the honor conferred.

Dr. Hooper thanked the association for the kindness and forbearance manifested toward him as its presiding officer, and then the association was declared adjourned, to meet in Cleveland, O., on the first Tuesday of June, 1883. The number of delegates in attendance, as shown by the secretary's register, was 947.

Most of the scientific work of the meeting was, of course, done in the sessions of the several sections, and we regret that our time and space will not permit of our giving a review of this work.

ARKANSAS STATE MEDICAL SOCIETY.

This Society held its seventh annual meeting at Little Rock May 31st and June 1st, with an attendance of about sixty members. The sessions were held in the hall of the House of Representatives.

Dr. Southall, chairman of the committee of arrangements, gave the address of welcome, and was followed by the president, Dr. R. G. Jennings, who delivered an address, in which he related at some length the history of the State Medical Society, and of the efforts to secure appropriate legislation in that state to regulate the practice of medicine and to suppress quackery. He called attention to the imperfections of the laws enacted last year, and stated some facts showing the great importance of changing that law in several particulars. One fact which he stated is of considerable interest: "Several counties in the state are without graduates in medicine or surgery, and in many other counties, among the members of the board of examiners, will be found men who never saw the inside of a medical college."

From the statistics of registration he concludes that there are not far from 2,000 practitioners of medicine in the State of Arkansas at the present time, of whom only 750 to 800 are graduates.

He then referred to the work of the State Board of Health, which he commended very highly; and then spoke of the medical college of the Arkansas Industrial University. He also

called attention to the success of the effort made at the last session of the legislature to secure the establishment of an insane asylum. The building is now in the process of erection, and will probably be ready for occupancy in the fall.

Dr. Jennings closed his address with a reference to the recent action of the New York State Medical Society in regard to the revision of the code of ethics, speaking emphatically in condemnation of that action.

At the afternoon session the committee on scientific communications presented the programme of papers to be presented and read.

The first paper read was that of Dr. P. O. Hooper on "Insanity and Insane Asylums." He stated that statistics show the number of insane persons in the United States to be much smaller relatively to the entire population than is the case in England; and that the proportion in the south is less than that in the other sections of this country. He discussed at some length the nature and extent of the provision that should be made by the state for the care and treatment of its insane population, and made reference to the new asylum now in process of erection for the Arkansas insane.

Dr. Z. Orto then read a paper, in which he considered "The Cause of Malarial Poison." This called out a good deal of discussion as to the influence of bacteria.

Dr. J. A. Dibrell, Jr., read some "Clinical Notes and Observations on Prevailing Fevers." He was followed by Dr. G. M. D. Cantrell, who read a paper on "The Bilious Fevers of Arkansas;" and then Dr. Dibrell, Jr., read a paper on "The Treatment of Croup with Hydrargyri Sulphas Flava," which had been prepared by Dr. E. R. Duval, who was unable to be present to read it himself.

At the evening session Dr. J. M. Keller read a paper on "The Prevention of Syphilis and other Diseases;" Dr. T. E. Murrell read "A Study of the Red Corpuscles of the Blood;" Dr. J. F. Bennett read a "Report of a Case of Fracture of Tibia and Fibula," and Dr. A. Dunlap reported a "Case of Spinal Meningitis."

At the Thursday meeting Dr. W. H. Hawkins read the report of the Committee on Medical Education; and Dr. Southall that of the Committee on Education; and Dr. Dibrell, Jr. read for Dr. Duval the report on Practical Medicine.

A committee had been appointed to consider the advisability of establishing a medical journal in Little Rock, but after due deliberation reported unfavorably.

Dr. Bennett read a short paper in regard to expert testimony in courts of justice, and compensation therefor.

With reference to the action of the New York State Medical Society in regard to the code of ethics, the Society adopted, as embodying its views, the resolutions of the Montgomery, Ala., Medical Society.

At the afternoon session a paper entitled "A Plea for Some Neglected Branches in Medicine" was read by Dr. G. C. Hartt. Dr. Wm. H. Hardison read "Nymphomania Cured by Operation for Hemorrhoids;" Dr. E. Cross read the report of a case of "Partial Occlusion of the Vagina Complicated with Pregnancy." A case of impacted calculus in a boy eight years old was reported by Dr. G. W. Hudson; a case of fracture of the skull by Dr. E. R. Duval; and Dr. J. W. Price read a paper on typho-malarial fever.

The officers for the next year are:

J. H. Southall, President; J. A. Dibrell, Sr., H. H. Turner, Z. Orto, D. J. Prather, Vice-Presidents; L. P. Gibson, Secretary; Edward Meek, Assistant Secretary; A. L. Breysacher, Treasurer; John Waters, Librarian.

Little Rock was selected as the place, and the Wednesday before the meeting of the American Medical Association as the time, of meeting.

The banquet in the evening was a most enjoyable occasion. We have never seen better tact or more ingenuity displayed in the preparation of such an entertainment.

In the large and pleasant hall at Alexander Park ample provision was made for the refreshment and pleasure of the members of the association. At each plate was a little white roll, in appearance suggesting a surgeon's bandage and labeled "Epicurean bandage." Upon unrolling this it was found to consist of a yard of fine gros-grain silk ribbon, upon the middle third of which was printed in red letters the bill of fare, in the form of a prescription, in Latin phraseology, the perusal of which afforded much amusement.

At each plate also lay a model of a surgeon's saw, in stiff card, upon which were printed the toasts, with the names of those who were to respond to them.

Dr. L. P. Gibson deserves the credit for the preparation of these ingenious accompaniments to the feast. It was the universal feeling that the entertainment committee, of which Dr. Gibson was chairman, had done the honors most satisfactorily; and none but the highest compliments were heard with reference to the arrangements for the banquet, or the comfort and pleasure of the delegates in other respects.

The following were the regular toasts, which were responded to as noted:

"The State Medical Society of Arkansas." Response by Dr. A. W. Carrigan, of Washington, in which he gave a history of the society.

"Our Retiring President" was next. Dr. Jennings being absent by reason of illness, Dr. Ewing, ex-vice-president, responded to the toast.

"Our President-Elect" was responded to by the new president, Dr. J. H. Southall, in a modest and appropriate manner.

"The Saddle-Bags" was responded to by Dr. W. H. Hawkins, who estimated that out of the 60,000 physicians in the United States, 40,000 practiced with the "saddle-bags."

"The Muse in Medicine," by Dr. T. E. Murrell, in verse, elicited rounds of applause.

Dr. Wm. Thompson next responded to the toast, "Our Medical College," in which he gave many good reasons why the State Medical College should be sustained by the people of the State.

Dr. J. H. Lenow elicited hearty applause by his response to the toast, "Our Bachelor Brethren."

"Ye Jolly Doctor" was to have been responded to by Dr. J. M. Kellar, but in his absence Dr. J. E. Bennett, of Fort Smith, was called on, and made a happy speech.

Judge Rose responded to the volunteer toast, "Medical Jurisprudence," Gen. G. D. Royston to "Arkansas," and J. N. Smithee to the "Press."

We desire to tender our most hearty thanks for kind courtesies and pleasant attention shown to the representative of the COURIER by the officers of the society and by the delegates generally. We wish them all the very highest prosperity and success, and anticipate for a society composed of such courteous gentlemen a most useful and pleasant future.

THE SOUTHEAST MISSOURI MEDICAL ASSOCIATION ON THE DEATH OF PROF. JNO. T. HODGEN, M. D.

WHEREAS, It has come to the knowledge of this association that Dr. John T. Hodgen, of St. Louis, Mo., has been suddenly stricken down by death: and

WHEREAS, In his demise the medical profession loses one of its brightest ornaments, science one of its ablest investigators, and the country one of its best citizens; and

WHEREAS, Many of the members of this association remember with pleasure and feelings of love and kindness his valuable counsel and cheering words when departing from their Alma Mater to assume the responsible duties of professional life; therefore

Resolved, That the character and ability of Dr. Hodgen as a model physician, surgeon and instructor in the science of medicine, is worthy of the imitation and emulation of all medical men.

Resolved, That the pinnacle of fame on which he rested, the many honors that were conferred upon him, and the many laurels with which he was crowned during life, were richly merited on account of the many, almost insuperable barriers which, by his untiring energy and perseverance, he surmounted in early life, never pausing in his rapid march till he mingled with those who are highest up the hill of science.

Resolved, That the memory of the grand achievements of his masterly intellect, the kindness of his sympathetic and charitable nature, and the arduous, praiseworthy work which his willing hands daily accomplished, shall be indelibly written upon the pages of history beside those of other great minds that have passed on before.

Resolved, That we deeply deplore his untimely death, and mingle our tears with those of his bereaved family, and that we hereby extend to them our heartfelt sympathies in this their hour of sore bereavement.

Resolved, That a copy of these resolutions be transmitted by the Secretary to the family of the deceased, to the ST. LOUIS COURIER OF MEDICINE, and to the *St. Louis Medical and Surgical Journal.*

A. E. SIMPSON,
G. W. VINYARD, } *Committee.*
P. R. WILLIAMS,

MARBLE HILL, MO., May 3, 1882.

ST. LOUIS MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting Feb. 21st—Dr. Gamble in the Chair.

Diphtheria.

Dr. Montgomery read a paper on Diphtheria (vid. p. 23).

Dr. G. A. Moses.—I think we must thank Dr. Montgomery for drawing our attention to a disease that has been so much a matter of discussion and dispute in so many respects, and which yet I think is not discussed sufficiently. We often feel our ignorance in relation to it. Dr. Montgomery always touches upon that phase of the discussion that is of the greatest interest to the patient—the therapeutics. I wish I had as much confidence in medicines as Dr. Montgomery has in the vapor of lime. So far as regards its effects upon the diphtheritic membrane, I have not found so much benefit from it; but in membranous croup, which the doctor differentiates from diphtheria, I think it is of immense value. Whether it is the lime that is contained in the vapor, or the constant warm, moist atmosphere inhaled, I am not prepared to say. I doubt very much whether a very large amount of the lime is inhaled with the vapor. I agree entirely with the observations the doctor makes in regard to the difference between membranous croup and diphtheria. I can see, I think, how they have been confounded; still it seems to me I have seen the diseases so positively differentiated that I must believe that they are due to different causes altogether. They permit of very different treatment. In diphtheria we should employ chiefly a supporting treatment; such means addressed to the arrest of the formation of the membrane as the experience of each one must recommend. The application to the exudation of pure spirits of turpentine I have used a very long time. I was taught to use it by my father. It frequently gives very beneficial results. Chloral hydrate also gives good results sometimes. I saw three cases in one family with Dr. Carson which were treated with pilocarpin. The exudation was thrown off much more rapidly than usual and the formation diminished. In those cases I think no local application was made except occasional mild detergent washes of chloral hydrate and permanganate of potash solution. The whole treatment was supporting, by means of milk punch, alcoholic stimulants, etc., and

the administration of pilocarpin. The cases recovered. I hope Dr. Montgomery will experiment with pilocarpin and give his experience in regard to it.

Dr. Hodgen.—I would like to hear Dr. Montgomery's opinion in regard to the value of tracheotomy in laryngeal diphtheria.

Dr. Montgomery.—I haven't much faith in it. I think when that has become necessary the membrane has gone down so low that an opening wont do any good. I have seen one or two cases operated on in this way, and they died. In croup I believe tracheotomy is valuable. If the case of diphtheria is bad enough to require that terrible operation, I think they will die anyhow. The pultaceous membrane has gone too low.

Dr. Moses.—Do you think what we call croup is localized diphtheria?

Dr. Montgomery.—No; I don't think it is.

Dr. Hodgen.—I would like to ask the doctor whether these cases die from blood-poisoning or suffocation most frequently?

Dr. Montgomery.—They die most frequently from an obstruction of the respiration by the pultaceous membrane. The membrane forms in the bronchial tubes and chokes them

Dr. Hodgen.—I would say, Mr. Chairman, that I have a great deal of confidence in tracheotomy. Not, of course, in curing the disease, but in preserving the life of the patient until the disease is under control. Perhaps my experience isn't the best argument for the conviction which I have. I have had a good deal of experience in tracheotomy in laryngeal diphtheria. Dr. Gregory performed the operation upon my own child. The child suffered ten days after with blood-poisoning, but the breathing was perfect; there was no obstruction. The child came near dying from the blood-poisoning. It was certainly a case of diphtheria and not croup. I have performed the operation in laryngeal diphtheria ninety times, and have fifteen living children instead of ninety dead ones. Fifteen lives are worth saving, though the percentage is not great. I never performed the operation in such a case that the parents or friends were not grateful; even when the patient died in six or eight hours, as they do sometimes, they were grateful for the relief it gave, and for the painless death that followed, instead of the fearful death from suffocation. The operation is

a simple one, and is a harmless one in careful hands. A patient ought never to be allowed to die of suffocation without tracheotomy. I believe a physician or surgeon to-day who allows a patient to die of suffocation without tracheotomy is culpable. I should feel very badly if a child of mine died while under treatment of another physician of suffocation, if the wind-pipe had not been opened.

Dr. Montgomery.—I fully agree with Dr. Hodgen that performing this operation sometimes saves the life of the patient, but not in laryngeal diphtheria. I don't think there is any chance at all when the disease is in the bronchial tubes. Where the diphtheritic exudation takes place down below the trachea, the operation will not do any good at all.

Dr. Hodgen.—I have now under treatment a child upon whom I operated a little more than a week ago, in which the membrane had passed down into the trachea. A large amount of membrane was discharged at the time of the operation, and continued to discharge in a more and more softened condition for several days. That child will recover; it is out of danger now. I have seen a number of cases, and Dr. Mudd has seen them also, of children who were dying of suffocation from the exudation within the larynx; they were suffocating from the narrowing of the chink of the glottis, and upon making the opening the relief was instantaneous. The child falls asleep after the first breath. I have seen them again and again cease to breathe and fall asleep, and the complexion change after the first breath. They then had more perfectly arterialized blood than they had had for hours before. We hear of cases where the operator resorts to artificial respiration, but this is resorted to under these circumstances only by those who are unacquainted with the operation.

Dr. G. A. Moses.—I am glad to hear Dr. Hodgen's explanation of the critical instant after tracheotomy. I never resorted to artificial respiration to relieve it. In a few seconds respiration is established; but I have always felt a second of alarm for fear the next breath might not come. I am satisfied with the explanation that the doctor has given. I have no doubt that the first full inspiration immediately after the tube is passed into the respiratory tract is an absolute rest sufficient for the stimulation of the organism for the moment. Unquestionably

many cases recover with tracheotomy that would die without it. The doctor says there is no danger connected with the operation. I believe there is a secondary danger—a danger of a traumatic character; but this is so remote that it ought never to influence us from urging the benefit of the operation. I am very glad to hear the decided stand that Dr. Hodgen has taken in regard to the operation. It is not ordinarily a difficult operation.

Dr. Mudd.—It seems to me that we may very properly make a distinction between forms of difficult respiration, viz., laryngeal obstruction and obstruction of the respiration from the accumulation of the membrane in the bronchial tubes, which Dr. Montgomery seems to put under one head. I have seen incidentally and directly a good many cases; I have seen cases in which I thought the difficulty of respiration and death resulted from the exudation into the finer bronchi of plastic matter, where there was also thickening of the cords, but where the chief obstruction to respiration was not through the larynx. It is a very common condition to have obstructed respiration commence by an obstruction in the larynx, and quickly following that a congestion of the bronchial mucous membrane, with bronchial râles and implication of the finer bronchi immediately previous to death. I remember very well a case that I saw with Dr. Briggs last fall, in which there was evidently a laryngeal complication, but in which the respiratory effort was not markedly difficult, but in which the suffocation was very marked. There was an absence of râles in that case, and I think Dr. Briggs also was pretty well satisfied from the history that there was a plastic exudation into the bronchi themselves. Death followed very quickly. It is unquestionably a fact that when death occurs from diphtheria, unless it be fatal simply from blood-poisoning, which is the exception rather than the rule, that it results from the deposits in the larynx, and from the difficulty in respiration. The moment the breathing becomes difficult from mechanical obstruction you have developed a very powerful factor in the exhaustion of the strength of the patient. I think the reason our percentage of recoveries is not greater is because we put off the operation too long. The doctor says he believes in the operation where it is necessary, seeming to imply that the operation may, or has been per-

formed where it was not necessary. This is possible, of course, but I think that more commonly the operation is put off until too late—until the recuperative power has become exhausted. In the majority of cases that have been submitted to my judgment concerning the propriety of the operation, there have already existed bronchial râles, the result of congestion from mechanical obstruction to the respiration.

Dr. Pollak.—I would like to ask Dr. Montgomery if he has ever seen diphtheria return in the same individual?

Dr. Montgomery.—I don't know that I ever have.

Dr. Mudd.—That recalls to my mind a case on which I operated a second time. The patient was a little German child living on North Nineteenth street, who had a well-marked case of diphtheria. The operation was performed and the patient recovered; the tube was removed and the wound healed. The tube had been out three weeks when the child was taken the second time, and it again became necessary to operate, but the child died.

Dr. Pollak.—I asked that question because I saw a case of this kind in this city several years ago. It occurred in a boy about eight years of age, the son of some people living in Benton place, a very healthy part of the city, in a new house, and with luxurious surroundings. This boy took diphtheria, and it was a severe case. I treated him with vapor of lime with happy effect, and he got perfectly well. That was along in December, a day or two before Christmas, I believe. In February he had another attack, less severe than the first, and got over it. In May he had a third attack. Between these three attacks he was perfectly well. Shortly afterwards the people moved away from here for the sake of their children, and went to Switzerland, and while there he had another attack within a year and a half after he had the attacks here. Not more than two weeks ago I received a letter from them, and he has had another attack, making the fifth, and he has got over it again.

Stated Meeting, May 16th, 1882.

Syphilitic Azoospermism.

Dr. Bryson read a paper on Syphilitic Azoospermism.

Dr. Carson.—A married man came to my office several years ago to be treated for some minor trouble, and afterwards re-

lated to me that he had had syphilis many years before, when he was in the army, and he consulted me as to the propriety of marrying. I thought I could detect some little evidence of syphilitic manifestation. There was a slight swelling of the testicles, apparently due to this cause. He recovered in a few weeks. Some weeks after he had another attack, which second attack left the testicles quite considerably enlarged and also very much hardened. I placed him that summer on iodide of potash, and the testicles diminished in size, and also in sensitiveness, which had been extreme. After the lapse of two years he married, and he was married two years before he had a child. The last time that I saw him to talk to him I asked him if his wife had become pregnant yet, and he said she had not; that he was not very anxious to have any children, although he took no means to prevent conception. I understand from other parties that he is quite anxious to have a child. Since then I understand his wife became pregnant, and has been delivered of a healthy child. Whether this is a case such as Dr. Bryson has referred to in his paper or not I don't know. The patient undoubtedly had syphilis, and no doubt this hardness of the testicles was due to that cause. He wouldn't let me examine his semen; and that is another point I want to refer to. A number of men have spoken to me in reference to the matter as to whether it were possible to determine whether a man had the power of procreation or not; and when I have answered them that it was, by an examination with the microscope, they would not let me make the examination. They were not willing to submit their seminal fluid to an examination. Dr. Bryson also made another statement in regard to anesthesia in which my experience has been quite different. He says that the genital organs are the last to lose their sensitiveness under the influence of an anesthetic. My experience has been that the anus is the most sensitive, and the last to lose its sensitiveness under the use of chloroform or ether.

Dr. Bryson.—I would like to ask if both testicles were swollen in the case the doctor related, or only one?

Dr. Carson.—Just one.

Dr. Bryson.—Was the same one swollen both times?

Dr. Carson.—Both times; after the first attack it seemed to

recover the normal condition. The last attack persisted several months.

Dr. Bryson.—There was one good testis?

Dr. Carson.—Yes, sir.

Dr. Dean.—I noticed one thing, Mr. President: in the remarks the doctor perhaps designedly omitted the use of the word spermatozoa, and I think the word azoospermism is preferable, as it indicates the etymology. I have seen very few cases of azoospermism from syphilis myself. I believe it is pretty rare. When it does take place, it is almost always due to gummatous degeneration. I have seen eight or nine cases of azoospermism due to epididymitis. It is well known that epididymitis may have such an effect upon the spermoids that are forming that they will not become active at all, and in fact only reach the vasa by the mechanical action of the ciliated cells lining the tube of the epididymis. I think that azoospermism from syphilis is by far less frequent than it is from epididymitis following gonorrhea. I agree with Dr. Carson that the anus is the last to yield to an anesthetic. I believe the sexual organs are next. I had a somewhat laughable instance not long since. It is not my custom to practice outside the hospital, but there was a lady who was very anxious to have me operate on her for external piles. She called at my office, and as I thought I could operate without giving her an anesthetic, I had no one else present; but I couldn't persuade her to let me remove the tumors without giving her an anesthetic, and several times after I had administered the anesthetic, and after I had her pretty well under its influence, and took hold with the forceps, she would straighten out suddenly. In order to bring the tumors down I introduced my finger into the vagina, and she didn't seem to notice it; but as soon as I touched the tumors she would straighten herself out.

Dr. Bryson.—In Dr. Carson's case I think it is very likely that the man had syphilitic enlargement, painless enlargement of the testicle, and afterwards it may have been restored to its integrity; but in the cases that I related here there was no history of any enlargement; the patients were intelligent persons and not of the class that are perfectly indifferent to their condition; and I think that it is hardly to be supposed that they would have had an enlargement of the gland without observing it.

I remember a case where both glands were enlarged from syphilis, and where the patient did afterwards recover. As regards the relative frequency of syphilitic and gonorrheal azoospermism, I think Dr. Dean is perfectly correct. Where I have seen one case that looked to me as clearly traceable to syphilis, I have seen a considerable number of those that seemed to be distinctly traceable to gonorrhea and epididymitis. I think Dr. Dean treated a case, or at least saw a case that I saw, where the man had syphilis, and where he was sterile; but he had had gonorrhea and epididymitis previously; so, of course, we couldn't include it in such cases as I have described. The reason why I think these cases are incurable, and the reason why I think there are more cases of syphilitic sterility in the male or from the male than we are aware, is because, in the first place, the patients do not have themselves examined, and then in the next place, if I am correct in my supposition of the nature of the trouble, it is a pathological condition which is insidious in its attack, drawing no attention; it is a fibrous degeneration; it is similar to a cirrhosis almost, and doesn't result in inflammation, so that there is nothing to direct the patient's attention to it. He is capable of maintaining sexual intercourse about as well as usual. In the cases which I have related all but one have been married for a long time, and were capable of the procreative act, but they were sterile, and this is what attracted my attention to the subject in trying to get at the real reason for the sterility. In one case I have known the man most intimately; he has had two children which resemble him so much that there is no doubt about his being the father. All of a sudden the wife ceases to bear any more children. I don't know that there is any reason for this in the wife, but it is very clear that there is a reason in the husband by reason of his azoospermism. He most assuredly did not have gonorrhea; had no inflammation of the genital organs since he was married, for I have seen him almost every day. I have been treating him and the family, and he wanted me to keep a sharp lookout. He married against my advice.

With regard to the question of which part is most sensitive after administering an anesthetic, it is put down in the books that the ano-genital region is; I say in the paper, among the last to lose sensibility are the genital organs.

Dr. Carson.—I simply recited my case as a matter of interest and to get the doctor's opinion in regard to it.

Dr. Pollak.—I would like to ask Dr. Bryson how he asks the patient to bring some of the seminal fluid for examination. My experience has been like Dr. Carson's. I have never had a case in which the patient was willing to have it examined.

Dr. Bryson.—Tell them to bring the last few drops that can be squeezed out of the urethra; the one-tenth or one-twentieth part of a drop is enough for an examination.

Dr. Shaw.—How long have you had these patients under treatment?

Dr. Bryson.—I have had one under treatment twelve years. There was one cause of trouble that is not very easily eliminated, that is varicocele, a slight varicocele.

Two things strike me as strange: I have been present at post mortem examinations, and all the organs were examined, from the top of the head to the feet, but the genito-urinary organs. It seems to me that the kidneys are not examined unless there is something pointing directly to kidney trouble; and the next point is the infrequency of the examination of the testes in connection with genito-urinary troubles. Some time ago I had occasion to operate upon a very intelligent gentleman whom several other surgeons had treated; he had a stricture of the deep urethra, and had been treated by quite a number of surgeons. I treated him four or five weeks, and at last performed perineal urethrotomy without a guide. The first time that I examined this man, on the first examination of the genito-urinary organs, I noticed that one of the testicles was missing, and I asked him how he lost the right testicle. He said: "Doctor, you are the first who has asked me that question. When I was a boy, in playing with a dog, it bit me on the right testicle, and it shriveled up, atrophied and disappeared." There is nothing but a small fibrous lump not larger than a bean left. I saw a man a day or two ago who has no erection, no sexual desire at all. He had abused himself somewhat sexually, and had been given bad hygienic advice, to have connection with lewd women, which is, in my opinion, malpractice of the worst kind; he had fallen, of course, into a melancholic state of mind, and became finally incapable of having an erection during the waking state; but on going to sleep he would have an erection,

and would wake up and find that an emission had occurred. The testicles were unusually sensitive, both of them; one was a little smaller than the other. I asked him to bring me a specimen for examination; and although he brought quite a fresh sample of the fluid, the spermatozoa were quite motionless. This man is engaged and is anxious to be married. He is in considerable trouble on that account. It occurred to me that the sensitiveness of one of the testicles was due to a varicose condition of the venous radicle.

UNDESCENDED TESTICLE.

Dr. Carson.—I saw a case the other day which may be a departure from the discussion, but if the gentlemen will allow I will relate it. A young man 26 years of age called at my office. He appeared to be well built and healthy in every way. He presented himself on account of nervous prostration, and in examining him I found that there was only one testicle present. On examining the groin I found quite a large tumor, nearly as large as an orange, and over which he had placed a pad, which he said had been recommended by a New York surgeon, whom he said had told him that it was a hernia. The history of the case was this: There never has been a testicle on the right side; there has always been a lump in the groin; for the last two years he has noticed an increase in the growth until it has reached the size mentioned—about as large as an orange, or a little larger. On examining this enlargement I could detect the enlarged testicle. It may be a sarcoma. The man seems very healthy, and complained of no difficulty in sexual connection or in his sexual desires.

Dr. Pollak.—Some time ago I saw a similar case; a portion of the intestine had slipped down and formed a large hernia; and as he was a laboring man, and had to do a good deal of lifting, it had gradually increased in size. I could feel the testicle very distinctly in the groin.

DR. GEO. J. ENGELMANN will spend the summer months in Vienna, where he will have every facility for prosecuting his studies with reference to the physiology and pathology of the uterine mucous membrane. He promises us letters from that great medical center.

MEDICAL ETHICS.

The code of medical ethics may be summed up in this, that a physician should be a gentleman, and should treat other physicians and his patients as he would wish to be treated under like circumstances. And your duty in this matter is to attend to your own ethics and not those of other people. Medicine is not a rigid system of rules and formulæ as it was in ancient Egypt; a fixed creed to which you are to subscribe, and from which you must not vary. It is a living, growing thing, making use of every resource which the progress of science brings; it is truly eclectic and catholic, testing all things, and holding fast to that which is good. It is not a system which forbids the use of any particular remedy, or limits its followers within the narrow bounds of any sect or ism. There are such systems, and there are a few men who advertise themselves as followers of such systems, and who really do follow them. There are also many men who so advertise, but who really do not follow them. Some of these last are well-educated physicians, "but they are —that is to say, from the point of view of a gentleman, they may be considered as—in short, the more you know of their methods the more fervidly you will assent to what I have not said about them."

One of the latest authoritative expressions of opinion on this subject is the following resolution, recently adopted by the Royal College of Physicians in London:

"While the college has no desire to fetter the opinion of its members in reference to any theories they may see fit to adopt in connection with the practice of medicine, it nevertheless considers it desirable to express its opinion that the assumption or acceptance by members of the profession of designations implying the adoption of special modes of treatment is opposed to those principles of the freedom and dignity of the profession which should govern the relations of its members to each other and to the public. The college, therefore, expects that all its fellows, members, and licentiates will uphold these principles by discountenancing those who trade upon such designations."

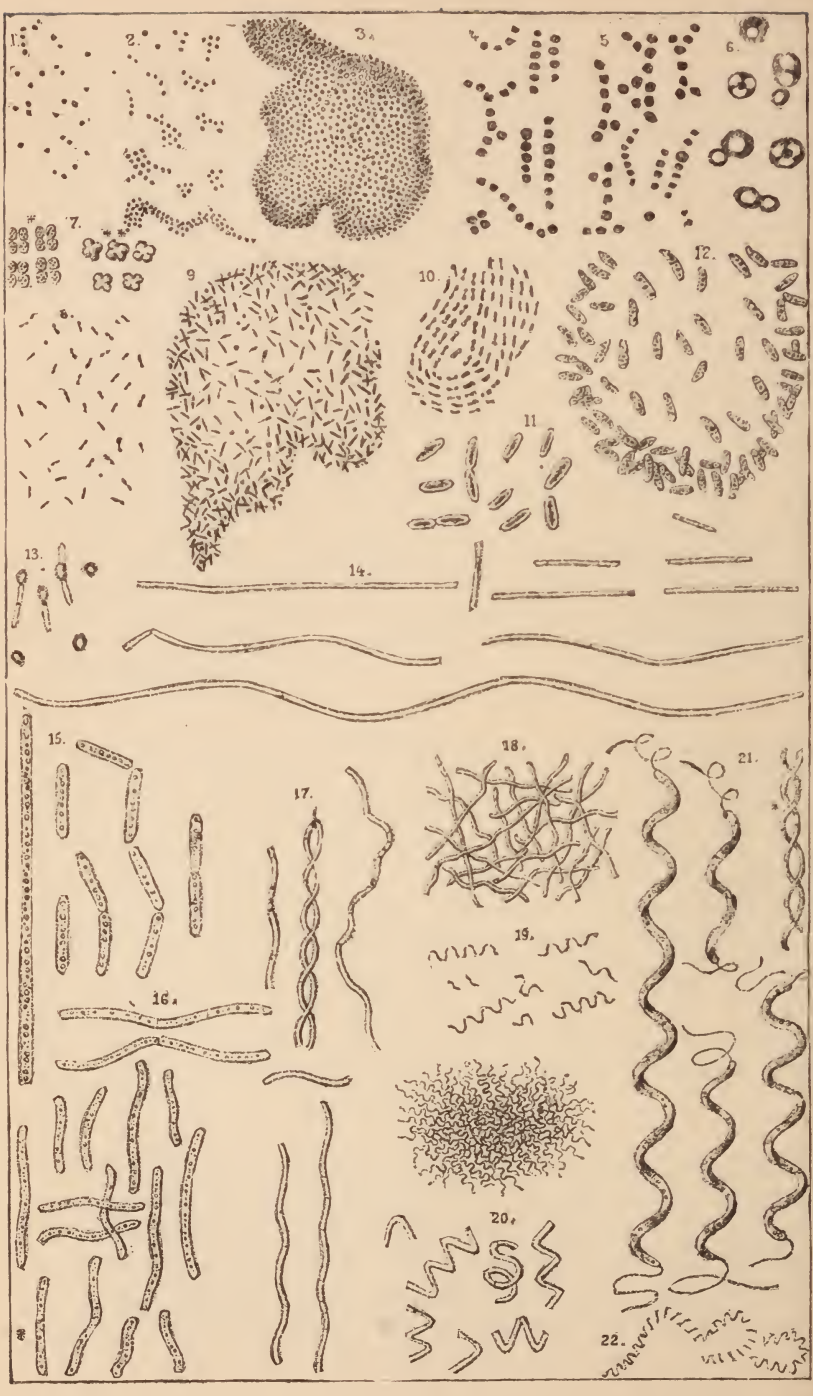
This last sentence touches the root of the difficulty. *Those who trade upon such designations.* Let us take a concrete example. You treat a case of pemphigus with arsenic. You may

theorize as you like about the essential nature of pemphigus; you may select arsenic because you think it would produce the disease, or because you think it produces something contrary to the disease, or for no reason whatever beyond the empirical fact that you have seen a case of pemphigus recover under the use of arsenic. Also you may give this arsenic alone or combined with other substances, and in any dose that you please, from the decilionth of a grain to a grain, and you may explain the results as you like. But as an educated physician, and a gentleman, you may not advertise yourself as an arsenio-pemphigist, and denounce every one who does not adopt your theory and practice, and as there is a good deal of common-sense truth in the old adage, that a man may be known by the company he keeps, you will not have more to do than you can help with the men who do so advertise themselves; and still less will you have to do with those who advertise themselves as anti-arsenio-pemphigists, and then treat their cases with arsenic after all, and claim the results as due to dynamized brick-dust.—*Jno. S. Billings in address to Class of* 1882, *Bellevue. Med. News*, Mar. 15, '82.

HODGEN MEMORIAL.—A committee of the St. Louis Medical College Alumni Association, together with a committee of the trustees of the College and others, have been intrusted with the preparation of a suitable permanent memorial of the late Prof. Jno. T. Hodgen. It is believed that the alumni of the College and other professional friends of Dr. Hodgen will take pleasure in contributing such sums as they may be able to procure a marble bust and an oil portrait of Dr. Hodgen, to be placed in the College building.

It is requested that all interested will respond promptly by sending their contributions or pledges to Dr. F. J. Lutz, 2002 Carondelet Ave., St. Louis, Mo.

GRADUATES OF BELLEVUE HOSPITAL MEDICAL COLLEGE.—A second decennial revision of the Catalogue of Alumni of this College is being prepared for publication, and we are requested to ask that all graduates send their present address, at once, on a postal card, to the Historian of the Alumni Association, Bellevue Hospital Medical College, New York, N. Y.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The accompanying plate is copied from Magnin-Sternberg's work on Bacteria; it was originally drawn by Prof. Cohn, with an equal magnifying power of 600 diameters for all the numbers, which may be, therefore, readily compared as to size as well as form. It first appeared in Microscopical Journal, and has been repeatedly copied into other works:

NUMBER.

1. Monas prodigiosa, red color.
2. Micrococcus vaccinæ.
3. Zoogloea form of micrococcus.
4. Micrococcus ureæ, torula form.
5. Micrococcus, torula form, from milk.
6. Saccharomyces glutinis, rose red.
7. Varieties of sarcina.
8. Bacterium termo, single individuals.
9. Bacterium termo, zoogloea form.
10. Bacterium pellicle on sour beer.
11. Bacterium lineola, single.
12. Bacterium lineola, zoogloea form.
13. Spore formation of bacterium.
14. Bacillus subtilis.
15. Bacillus ulna.
16. Vibrio rugula.
17. Vibrio serpens.
18. Vibrio serpens, felted mycoderma form.
19. Spirillum tenue, singly and in mycoderma form.
20. Spirillum undula.
21. Spirillum volutans.
22. Spirochæte plicatilis.

ST. LOUIS
COURIER OF MEDICINE.

VOL. VIII. AUGUST, 1882. NO. 2.

ORIGINAL ARTICLES.

BACTERIA.

BY C. O. CURTMAN, M. D., ST. LOUIS.

[*Read before the St. Louis Medico-Chirurgical Society, June 13, 1882.*[1]]

PRIOR to the introduction of the microscope no difficulty was experienced in distinguishing vegetable from animal organisms and in separating the domains of botany and zoology by well marked lines of division. When, in 1675, Leeuwenhœck discovered in various liquids living organisms having spontaneous movements, they were, as a matter of course, assigned to the animal kingdom. As observations multiplied and new discoveries were made by means of improved instruments, doubts arose whether all the minute beings really were of animal nature. Sharp controversies occurred between observers, who were often more conspicuous for obstinate assumption

[1] This paper was illustrated by the magic lantern—and a running commentary upon the views as they were thrown upon the screen. Thus, in describing the process of fructification, some points were more fully developed in the commentary than in the paper itself. We regret that we cannot give the comments as well.—[ED.

than for convincing argument. Undue generalizations were made from isolated facts, and evidences of the characters of single individuals were extended to the whole class. So unsatisfactory did this state of divided opinions appear, that Hæckel avoided the decision by founding a new empire and consigned all these lower organisms to a group named by him Protista. Modern investigation, enriched by multitudes of accurate observations made with superior instruments, avoiding the error of premature deductions, has thrown more light upon the subject and settled the opinion, that the individual organisms sufficiently differ to be classed among the plants or animals, not as a whole, but according to their individual characters.

The bacteria, to which I desire to call your attention this evening, are a distinct class of these micro-organisms, which, after having been cast about between animals and plants, have finally found a resting place among the latter. Those among them which do not contain chlorophyll have been associated with the *fungi*, while the rest have been apportioned to the *algæ*.

Bacteria, then, are very small plants, visible only by the microscope, but appearing often in incredible numbers. They thrive best in liquids or in moist places, and require, like other plants, for their nutrition oxygen, hydrogen, nitrogen and carbon, together with a few mineral constituents in limited quantity. The presence or absence of free oxygen influences their growth and the manner of their fructification. In liquids containing organic ingredients they are capable of causing various decompositions. Thus, for instance, is alcoholic fermentation dependent on the presence of *torula cerevisiæ*, putrefaction is due to *bacterium termo*, butyric acid fermentation to a *bacillus* (*subtilis?*), and the conversion of urea into ammonium carbonate to *micrococcus ureæ*. Their size varies considerably, and we find among them species, such as *spirillum volutans*, which reach the length of 40 to 50 micro-millimeters ($\frac{1}{635}$ inch to $\frac{1}{500}$ inch), while others are only half a micro-millimeter or

less in diameter, and some are barely perceptible by the highest magnifying powers of our instruments. In shape, bacteria differ greatly. Some are spherical or oval in form, others rodlike, or spiral, or wavelike. The spores of almost all of them are spherical; with this there is great diversity in grouping. Spherical as well as oval bacteria frequently occur singly, also connected together like chains or rosaries, or united in couples or by fours, or else held together in larger lumps by a gelatinous substance. The more elongated varieties, the filiform, or rodlike, or spiral bacteria are often found in swarms or in membranelike, felted, matted layers. The manner of their reproduction, also, presents great variety. Most of the bacteria multiply by fission, some by budding, as the yeast plants; others by the formation of spores. The spores may be formed within the mycelial threads, or in hyphæ springing from these, or else in special sporangia, or by successive cleavage from the end of basidia. It has recently been established, that several kinds of bacteria may, under varying conditions of temperature and nutrition, have various modes of fructification, hitherto deemed incompatible with each other, and thus phenomena have been satisfactorily accounted for, which appeared involved in hopeless contradiction. The same species may also develop diverse kinds of spores: swarming spores, zygospores, resting spores, etc., differing among themselves in the manner of their development and their capacity of resistance to external influences. Since the time (1837) that Cagniard de Latour announced that the fermentation of saccharine liquids was due entirely to the presence of torula and similar bacteria, these organisms have attracted universal attention and have become the subject of zealous investigation and bitter controversy. When it was finally asserted that bacteria might become active causes of sickness, and that many varieties of disease among plants, animals and men might be originated by their agency, there arose many enthusiastic advocates and adversaries for or against this the-

ory. Many were led to make microscopical investigations, whose previous education and experience but little qualified them for such pursuits, and the most wondrous discoveries were claimed to be made, which, when more critically examined, dissolved into thin air. Others, unwilling to take the trouble of investigating so difficult a subject, preferred to omit all examination and formed their opinion from preconceived notions. Thus on one hand the importance of bacteria was enormously exaggerated, and for every possible and impossible pathological condition a special micrococcus was created, and the few real facts were so much mixed up with fancies, that it was quite natural that the opponents should ridicule the whole matter and deny that any grain of truth could be found in the tangled mass of facts and fiction. The confusion was rendered still greater by the revival of the old controversy of abiogenesis and heterogenesis in connection with the question. One side affirmed, the other totally denied the presence in the air of vast quantities of germs, seeds or spores of low organisms, which only awaited transfer to appropriate localities to be developed. After much contention and many ups and downs, the panspermatists finally came off victors as to their most important points.

During this time of general strife many theories and classifications originated, which, during a time of calm reflection, would never have been built up on so narrow a base. Thus, the polymorphism, proved to exist in some species, was claimed to be the rule in regard to bacteria, and all the many varieties were affirmed to be only metamorphoses of a single species. Others classified them only according to size, and divided the spherical varieties into *micrococcus*, *mesococcus*, and *megacoccus;* the elongated ones into *microbacterium*, *mesobacterium* and *megabacterium*. All this to the entire disregard of shape, mode of growth and fructification or other characteristics. Just think of a naturalist attempting to classify fishes into *micropiscis*, *mesopiscis* and *megapiscis*, and you have an idea of the appropri-

ateness of thus classifying bacteria. In spite of all these vagaries, able investigators continued their work in this interesting field; and many scientific men, to whom biology had not been familiar before, became so interested as to engage earnestly in the subject. I need only name Tyndall and Helmholtz, who, by ingeniously devised experiments, established facts so firmly as to silence even the most ill-natured critics.

One of the best classifications of these low organisms, recommending itself especially by its clearness and simplicity, was proposed by Prof. Cohn, in 1872. He divided bacteria into four tribes:

1. *Spherobacteria*, those occuring in spherical shape in their perfect (adult) state. The only genus: *Micrococcus* is composed of three species, the *chromogenes* (colored), *zymogenes* (yeasts) and *pathogenes* (disease bacteria).

2. *Microbacteria*, rodlike. A single genus occurs: *Bacterium*, which is subdivided into the species, *B. termo* and *B. lineola*, bacteria of putrefaction.

3. *Desmobacteria*, ribbon-like filaments, comprising two genera:

Bacillus, rectilinear filaments and rods: *B. anthracis*, *B. subtilis*, *B. tuberculosis*, *B. leprœ*, *etc.*

Vibrio, undulating filaments, in various species.

4. *Spirobacteria*, corkscrew-like spirals, containing two genera: *spirillum* and *spirochæte.*

In regard to the grouping of bacteria, the following terms are employed to distinguish the varieties:

1. *Torula* form, spherical varieties, being by their budding mode of proliferation united into rosary-like chains (Billroth's streptococcus).

2. *Leptothrix* form, chains of the more elongated varieties (Billroth's streptobacteria).

3. *Zooglœa* form, rapidly multiplying masses of bacteria held together by glutinous substance. Only spherical and short oval varieties are thus grouped. The individuals are immovable.

4. *Mycoderma* form (fungus-pellicle), groups of elongated varieties felted together without jelly substance by interlacing of mycelial threads (Billroth's petalococcus), motionless.

5. *Swarms*, filiform or spiral bacteria crowded together without interlacing, and generally in constant, active motion.

While it is comparatively easy to distinguish the varieties of elongated form, the greatest difficulty is encountered with spherobacteria; for the spores of almost all kinds of microscopically small organisms either have a spherical shape, or approach to it, when viewed with moderate magnifying powers; globular masses of inorganic material may be readily mistaken for them, especially as the so-called "Browne's molecular movements" closely imitate the peculiar oscillatory motion of living bacteria. Recently, the observations of Dallinger and others, by means of superior lenses, have established in a number of bacteria very peculiar flagella or cilia, which will facilitate recognition. The study of the development of such minute organisms is rendered difficult by the liability to deception and errors of observation. Whoever has conducted such investigations, and has sat for hours, poring through the instrument, watching the changing forms of an individual, knows well how easily the eye tires, how quickly, during even a very short interruption, one object sinks out of focus and is replaced by another. The latter is especially possible while we employ our modern objectives with large angular aperture and short focus. Even when two observers observe alternately, the change is not always executed without mistake. To anyone familiar with such work, it is easily accounted for how Bastian could in a short space of time see his wonderful changes of chlorophyll granules into infusoria and be led to such venturesome inferences as he presents, in his "Beginning of Life," as proofs of spontaneous generation. Similar sources of error, and especially the difficulty of excluding from liquids

germs of all kinds, may perhaps explain the queer metamorphoses of one kind of micrococcus into another, claimed to have been observed by Hallier and others.

The question of alcoholic fermentation was finally settled by the labors of Pasteur, Helmholtz and others, and the torula cerevisiæ recognized as the sole cause of this process. As early as 1837, Cagniard de Latour, Schwann and Kützing had announced this discovery, but it required a protracted contest against the authority of Berzelius and Liebig, and the advocates of their chemical theories, before the facts were placed beyond controversy.

Meanwhile there had been discovered hundreds of organisms, mostly belonging to the fungi, whose larger size and characteristic shape facilitated observation, and who were proven to be active causes in the production of diseases of plants. The immense importance to agricultural and commercial interests of epidemics befalling cultivated plants, such as the potato disease, occasioned by the *peronospora infestans*, the rusts and smuts of the cereals produced by the parasitism of *puccinia*, *polycystis*, *tilletia*, etc., the grape rot by *oidum Tuckeri*, directed the attention of governments and of scientific societies to this domain and furnished the means of thorough investigation.

Next, some diseases of the lower animals were found to be due to invasion of parasitic fungi. It is universally known that at the beginning of the cold season in autumn flies die away rapidly. As a matter of course this is ascribed to the cold temperature by most men, even at the present day. But if you closely inspect such a fly, you will find, even without the aid of a lens, that it is covered with a mould-like covering, which often fixes it to the window pane. The animal looks as if it had become hairy. Closer investigation reveals that the whole body of the insect is filled by the mycelium of a fungus called *empusa* (or *achyla*) *muscæ*, which has pushed its hyphæ through the tissues and outside of the body, is filled with spores, many of which, on expulsion, adhere to the window. If any of

these spores are brought in contact with a healthy fly, they enter the spiracles, germinate within the body, develop their mycelial threads, which grow at the expense of the tissues and in a short time kill the fly, no matter whether it be warm or cold.

A very similar fungus, the *botrytis bassiana*, infests silkworms and destroy them by growing throughout their bodies. This disease is known under the name of *muscardine*. Another malady of the silkworm, called *pebrine*, began in 1853 to invade the southern provinces of France and threatened to destroy the most important of its industries. After losses amounting to many millions, in 1865 Pasteur was prevailed upon by Dumas to undertake its investigation. This resulted in tracing the cause to an invasion by bacteria and suggesting a speedy remedy. The *micrococcus nosema bombycis* is of oval shape, only 0.5 micromilimeter in diameter and 0.9 m. m. long. Its spores infest the moth, enter into the eggs and destroy the young silkworm.

Since 1850, splenic fever, the pustula maligna, or anthrax of some authors, was by Cohn and others referred to the agency of *bacillus anthracis*, and by the classical experiments and observations of Koch, in 1876, enrolled in the list of diseases indubitably caused by bacteria. As this disease affects man as well as animals, many began to hold opinions that all infections befalling the human family were of bacterial origin. But with immoderate zeal enthusiastic theorists transgressed all limits of prudence. Careless observations by unqualified men multiplied and brought the whole matter into such discredit, that even the most indubitable facts were neglected and discarded by the antagonists of the theory. However, among many unreliable experiments, a number of valuable contributions were made to our knowledge, especially in the search after disinfectants or agents calculated to destroy the life of lower organisms. Thus it was established that not all kinds of bacteria are affected alike by the same means;

that the same plant, in its different stages of development, is possessed of very different powers of resistance. For while most of the perfect plants, their mycelia and hyphæ, are killed by a temperature of 50° C., there are others which, according to Calvert's experiments, still continue to grow and to form spores at 150° C. The spores are always capable of greater resistance to heat and other destructive agencies than other parts of the plant. According to Thudichum's experiments, quinia is a most efficient bactericide. Calvert published a series of comparative effects of carbolic and cresylic acids and other derivatives of the aromatic compounds. Many bacteria are most easily destroyed by boracic acid, others by silver nitrate or mercurial salts, while others are so tenacious of life that they will succumb to no means which do not equally destroy all organic tissues.

It would far exceed the limits of this paper to enumerate the proofs, as yet scattered and inconclusive, for or against the bacterial origin of numerous diseases. So, instead of reporting the experiments of Tommasi-Crudelli and A. Laveran on malaria, or the labors of the yellow fever commission, appointed by our National Board of Health, and a number of others of equal interest, I will confine myself to an account, in short outline, of the most recent investigations in regard to splenic fever, as the causation of this terrible disease by bacteria is now so well supported by facts that but very few will be found who doubt it.

The disease called splenic fever (Milzbrand, Charbon, Anthrax) is but little known in the United States, but frequent and terribly destructive in Europe. In 1876, Dr. Robert Koch, of Berlin, published in the periodical *Beitrage zur Biologie der Pflanzen*, a paper bearing the title: "On the Etiology of Splenic Fever (Milzbrand Krankheit) based upon the History of Development of the Bacillus Anthracis." Since this publication, others occupied themselves with the investigation and verification of the facts therein stated. M. Paul Bert at first thought he had re-

futed Koch's deductions, but soon found his mistake, and added new proofs in favor of Koch's views. Besides him, Cohn, Toussaint, Greenfield, Nægeli, Buchner and pre-eminently Louis Pasteur and his collaborators devoted their time and energy to these important researches. Before the publication of these experiments, the theory that diseases of man and animals may be referred to the introduction of foreign organisms into the tissues had stood on a feeble and much disputed foundation. Enthusiasts had generalized solitary discoveries, but not until now were experiments conducted with so much critical acumen, such thorough familiarity with microscopical manipulation and the most approved methods of investigation, coupled with such rigid precautions to exclude all possible sources of error. Dr. Koch proved beyond all doubt that splenic fever (or Milzbrand) is solely due to the infection by the *bacillus anthracis*. The discovery of the regular occurrence of micro-organisms of peculiar shape in the blood of animals seized with splenic fever was made at a much earlier date, and described in 1850 by Rayer and Davaine and by Cohn. Davaine gave them the name bacteridia; Cohn, bacillus anthracis. It was shown that this bacillus had great similarity to the bacillus subtilis found in hay infusions and to that found in butyric acid fermentation, and the view was expressed that the two were identical, and hence to be found naturally in the blood of the graminivora (who principally suffer from the terrible disease), but not by any means of importance, much less the cause of the disease. Koch found that the rods present in the blood of the animals before or after death, when brought into nutritive liquids, within certain limits of temperature, strongly extend in length, while within the mycelial cells shining points in great number make their appearance, which develop into globules, and after a while emerge as independent spores. Whenever these spores are placed into nutritive liquids at suitable temperature, they again develop into the rods of bacillus, and these again may pass through the same cir-

cuit. Thus the life-history of the plantlet was established. We have the resting spores, the mycelia, their growth and internal spore-formation just as in other similar organisms. It was next brought out that the living, growing plant is very sensitive to high or low temperatures, and is easily killed by a rise to 45° C., or a fall below 8° C. Liquids heated to 55° C. or exposed to freezing, no longer contained any living bacilli. Spores are only formed when, at a temperature above 12° C. and under 42° C., the atmospheric oxygen has free access. If at a temperature of 42° C. to 43° C. air is excluded, the bacillus no longer multiplies by spore-formation, but by elongation and fission.

Compressed air kills the rods easily; so does alcohol, rapid desiccation, or copious dilution with water, various saline solutions or hermetic closure of the containing vessels. The spores on the contrary are very capable of resistance; they can bear freezing, heating high above the boiling point of water (to 140° C.), and may be preserved for many years in a dry state without losing their vitality.

The rods have a length of 10 micromillimeters for each articulation, and are about 1 m. m. m. in diameter. During the formation of spores they elongate to 50 m. m. m., and attain a diameter of 2 m. m. m. Generally two of them are joined end to end at an obtuse angle; occasionally we meet, after fission, more articulations cohering. The spores have much less dimension and hardly attain 1 m. m. m. Lenses of high magnifying power and good definition are required for these investigations. As far as I know these facts in regard to the morphology and development of the bacillus are universally accepted, and no one disputes them. But its relation to splenic fever as its cause has been much doubted, and was until recently the subject of heated controversy. I deem it sufficient here to mention the principal results of the experiments made by Koch and others to answer this important question. Their conscientious and painfully accurate execution stands above all doubt.

If blood or tissues of an animal infected by bacillus and recently killed is at once and rapidly dessicated, then after a few days, not a single living bacillus is found therein, and animals inoculated with its solution do not sicken. If, on the other hand, such blood or tissues are slowly dried at a gentle heat, so that spores may be suffered to develop, then the inoculation of even small portions of this blood or tissues produces the disease with certainty. Even after preservation for four years such blood has retained its virulence. Putrefaction destroys the rods only then, when in a closed vessel all the oxygen is withdrawn by the *bacterium termo* (the peculiar agent of putrefaction). Spores, however, are not thus destroyed, and if air be freely accessible the rods remain alive. Burial of the animals, dead with the disease, deep below the surface, does not destroy the infection. Several years after burial Pasteur found bacilli over the graves, and healthy animals permitted to graze in such spots contracted splenic fever. Finally earthworms were proven to be carriers of the bacillus to the surface. (What an argument in favor of cremation!)

When blood containing the bacilli only in their rod-stage is strongly diluted with water, the rods die in a few days. Spores are not thus affected. Similar results are obtained with alcohol and various saline solutions.

Inoculation of healthy animals with liquids containing living bacilli or spores results without fail in infection. If the bacilli are brought into the lymphatics, it requires some length of time before they make their appearance in the blood, and sometimes death occurs before the bacillus can be found in the blood. But in such case lymphatics and glands show the bacteria in great abundance.

If the infectious liquids are filtered through porous septa made from plaster of Paris, clay, etc., they lose their power of infection entirely; hence the virus can not exist in solution. The same ingenious experiments by means of which Helmholtz in 1843 proved that alcoholic fermentation was produced solely by the yeast plant, and never by a sol-

uble ferment, were in their full extent repeated with the virus of Milzbrand, and all confirmed the conclusion that the bacillus anthracis is the sole cause of the disease. In reality all of the objections urged against the assumption depended upon deficient knowledge of the difference in the behavior of the living bacilli and the resting spores, and are removed by these facts becoming better known.

At the recent meeting of the International Medical Congress, in London, a most interesting report was made by M. Louis Pasteur on his experiments with bacillus anthracis. He cultivated the bacillus in chicken-broth, or in aqueous humor, or similar liquids, and by that means readily procured great numbers of these bacteria. If this material is used for inoculation, its virulence is unimpaired. Repeated cultivations retain the infecting power without diminution, provided the material is used in a few days after transplantation to a new portion of nutritive liquid. If, however, a month or more is suffered to pass after infecting the broth, and then a portion is mixed with new broth, if, then, this is allowed to stand for months and the process repeated, then it is found that after every repetition of this *tardy cultivation* the infecting power of the virus becomes more feeble, and after a few repetitions no longer produces fatal results by inoculation of healthy animals. On infecting animals, thus inoculated with the *reduced* virus, with material containing the bacilli in their most virulent state, there is no longer any disease produced; the reduced virus has acted as a protection against the most active infection, and an exact analogue to vaccination has been discovered by Pasteur. The efficiency of this method has been readily acknowledged, and at public trials before the French Provincial Agricultural Societies, its success has been so uniform that thousands of animals have since been thus inoculated in France and other countries. The experiments of Toussaint in France, of Greenfield and Burdon-Sanderson in England, of government experts in Austria, have since confirmed the value of this remarkable discovery.

By this method of artificial cultivation of the bacillus, Greenfield in Burdon-Sanderson's laboratory, and Dr. Hans Buchner in C. v. Nægeli's laboratory, have succeeded in depriving, in the 12th generation, the bacillus anthracis of all of its virulence, so that its inoculation no longer produced the least phenomena of disease, but at the same time ceased to be a protection against the unmodified virus.

In a similar manner did Pasteur investigate *chicken cholera*, a most destructive malady among the fowls in France. He found it caused by bacillus; he made his cultivations and experiments as before, and actually succeeded in procuring the protective modification. Inoculation of chickens has already become a popular device in France.

Pasteur, with his able corps of collaborators, is now engaged in extending his studies to other diseases and in investigating the cause of rabies, or hydrophobia.

Within the last few weeks the European journals brought us the report of another startling discovery announced by Dr. Koch in a paper read before the Physiological Society of Berlin on March 24th, 1882 (*Berliner Klinische Wochenschrift*, Apr. 10, '82), on the Etiology of Tuberculosis. Of this I will make a very short resumé. In all previous microscopical examinations of tubercles no special form of elements could be discovered, nor do the best instruments reveal anything until the method of *double staining*, recently introduced into microscopical research, is resorted to. When tubercular matter is treated with a solution of *methylene blue* in alcohol, the entire mass is stained a deep blue color. If this mass is next treated with a solution of vesuvin brown, the blue color is discharged and replaced by brown in all parts of tissues, with the exception of small, thread-like bodies, which retain the blue color very tenaciously. These bodies prove to be bacilli, 3 micromillimeters in length and 0.6 to 0.3 m. m. m. thick. They have been cultivated by Dr. Koch in sterilized and coagulated blood serum, and with these cul-

tivated bacilli his experiments have been made. They grow only between the degrees of 30° C. and 41° C., a condition of temperature rarely continuing long outside of the animal body. In the giant cells of tuberculous tissue generally two to three, sometimes more, bacilli are found. They are always present in the sputa of consumptive persons. Inoculation produces the disease promptly in a variety of domestic animals, as proven by several hundred experiments. The pearl disease of the cow, which was a few years ago discovered by Kerl, at the veterinary school at Berlin, to be identical with tuberculosis, was investigated and proven to be dependent upon the bacillus tuberculosis. It was produced at will by inoculation with tubercular matter taken either from sputa of phthisis or from cultivated bacilli. The description of the various experiments, and the strict safeguards employed against error, are exceedingly interesting and carry conviction with them. Even should nothing farther result from these discoveries, the certainty of transmission of tubercular infection, the importance of destroying sputa and other possible carriers of the infection, would lead to the most important prophylactic measures and give a ray of hope that this plague may be limited to a great extent.

To sum up the present state of our knowledge of bacteria, and especially of their relation to the etiology of diseases, we may be justified in maintaining:

1. That it is proven that multitudes of spores of microscopical organisms, both animal and vegetable, are suspended in the atmosphere, and are disseminated by it.

2. The difficulties to be overcome in their investigation are yet so formidable that up to the present we have but little accurate knowledge of many of these organisms, although capable men are at work to elucidate the biology of some of them.

3. That the life-history of a number of individual species of bacteria has been sufficiently studied to recognize them with certainty as producers of specific processes of disease, fermentation and putrefaction.

4. That one of the most important practical results of recent investigations is the light thrown upon the relation of the modified virus of protective inoculation to the non-modified virus of some infectious diseases, and the reasonable hope held out thereby of obtaining material for protective inoculation against other diseases, not as yet amenable to such treatment.

5. While analogy may justify the hope that other diseases besides those now known may be proven to result from bacterial invasion, and that we may attain to a more successful mode of treatment by such discoveries, it is unsafe as well as unscientific to assume identical causes for similar appearances, and we must content ourselves to suspend our judgment until really qualified investigators have placed the facts, *in each individual case*, above any doubt.

3718 N. 9th St.

PHLEGMASIA ALBA DOLENS.

By P. V. Schenck, M. D. *Resident Surgeon of Female Hospital. St. Louis.*

[*Read before the State Medical Association.*]

THERE is a special gratification in the study of a subject which has put in action so many of the finer qualities of the human intellect, has exercised those qualities in the line of a profession which, more than any other, is filled with true students, from whom we are receiving intellectual gems in the setting of our opportunities. Long is the argument, and bitter the discussion, on the etiology of diseases, before the professional decision is reached.

We are no nearer a decision in reference to phlegmasia dolens than when Rodriguez à Castro wrote, or Mauriceau in his work on distempers of the womb in child bed, described the condition of the apothecary's wife. Dewees in his day said it was as unsettled as in the time of Mauriceau,

and yet, though this subject has received more study than any other puerperal affection, with perhaps the exception of puerperal fever, yet to-day it is as uncertain as when Dewees wrote. Few diseases, says Leishman, have had a greater variety of designations, and they form an epitome of the various pathological theories.

The profession, whether from cultivation of the fertile field of gynecology, or from a loss of belief in their ability to find out, have during the last few years much neglected research in reference to this disease, which is less than any other understood. Is the cause local, or is it constitutional? Is the disease an inflammatory or a non-inflammatory condition? Cullen called every cold tumor a phlegma. Hippocrates used the term to signify inflammation. All inflammations have been supposed to occur from obstruction of vessels, that the red globules were impelled into vessels not adapted for them. This is what Boerhaave meant by his famous "error loci." Cullen considered all these obstructions as owing to spasm. Next the theory gained ground that inflammation resulted from debility of the vessels of the part affected. Though this disease usually occurs in the puerpera, yet its occurring in other conditions makes constitutional causes the more evident. Virchow has published cases of cancer of the stomach, in which phlegmasia dolens occurred, sometimes in the lower and sometimes in the upper extremity. Chapman reports such a case from cancer of the womb. Lee, Rokitansky and Moxon say it is inflammation, while Virchow, Hewitt and Barnes deny it; Trousseau looked upon the condition as similar to or like the cancerous cachexia, and the phlegmasia as a consequence of the cancerous cachexia; Ferrier and Dewees report the disease as existing in the arm of a male, and similar cases have been reported by Littre, Hervieux, Beck and Trumdre; Denman imagined it came from the absorption of milk; Puzos and Levret considered it as proceeding from a depot of milk; Van Swieten, Lientard and Sell all treated it as a milk metastasis; Mauriceau and

Callisin contended there was lacteal engorgement in the inferior extremities; Duges located the cause in the nervous system, and says there is an inflammation of the nerves in their sheath; others, again, that there is a nervous irritation and depression: Albers considered it a neuralgia, causing edema; Burns that it was an inflammation of the nerves; Bouillaud agreed with him in his second paper; Jameson thought the condition a peculiar inflammation, a condition in which water was effused, the same as in other states pus was given out; Hull contended and Fraser said his dissection proved that it is a peculiar inflammation, seated in the muscles, cellular membranes, and inferior muscles of the skin.

Disturbance in the circulatory system has been the most prominently attributed cause; Meigs mentions it not as a disease of areolar tissue, or of the lymphatics of the leg, but a cruel and very dangerous inflammation of the veins; Hull said that it was an inflammation from the sudden removal of pressure from the descending aorta. McClintock and Hardy called it a phlebitis; Meigs a crural phlebitis; Stamnius said that inflammation of the iliac and femoral veins would give rise to all the phenomena of phlegmasia dolens. Lee concluded there was an inflammation of the trunks and principal branches of the veins of the lower extremities.

Now, what is the attributed cause of the diseased veins? Stamnius has shown that inflammation of the veins cannot be excited from constitutional causes, independently of local irritation; that it commenced in the uterine branches of the hypogastric vein. Dunglison thought that pressure of the gravid womb obstructed the flow of blood, the serous part is thrown out into the cellular membrane; thus the vein might be obstructed. Bouchet taught that there was an arrest of the circulation in the vein. Watson puts inflammation of the femoral, obliterating its cavity, as the essence of phlegmasia dolens. Moore sees a relaxation of pregnancy followed with spasmodic contraction, and rupture.

Tyler Smith believed in blood poisoning, and thought its cause allied to puerperal fever, so much so, that the patient who had phlegmasia had made a narrow escape from puerperal fever. Fox mentions it as one of the phenomena of puerperal fever; Denman thought it was preceded and caused by offensive lochial discharges, to the absorption of acid matter in these secretions from the womb. Many contend that the blood is poisoned and filled with effete material; McKenzie and Hervieux say there is a puerperal toxemia, and phlebitis of crural vein is a sequence; Mauriceau said it was a reflux on the part of certain tumors, which ought to have been evacuated by the lochia. Trousseau looked upon it as an extension of inflammation from the uterine sinuses. Velpeau, in 1826, published cases demonstrating the propagation of the inflammatory process from the uterine to the iliac veins. Schroeder says that in parametritis the inflammation of the connective tissue extends less to the connective tissue of the pelvis than to that of the thigh; the inflammation may thus extend either to the subcutaneous tissue, or to the connective tissue, which envelopes the large vascular and nervous trunks, and this leads to a phlegmonous inflammation.

Barnes has shown that it is not an extention of inflammation from the womb; he has a number of specimens of uteri, removed from persons dying from phlegmasia dolens. The state of the uterus was healthy, there was no evidence of pus; the broad ligament on the affected side was also healthy.

Now, then, if there be no inflammatory condition of the uterus, or broad ligament, no pus formation, no offensive or purulent lochial discharges, what produces the condition of the veins which is said to cause this disease? The general view of the profession is that there is a coagulum—a clot. Roth has reported a sudden death from phlegmasia dolens, due to embolism of the pulmonary artery, by a clot detached from a varicose vein. Graily Hewitt thinks the venous obstruction originates in the uterine sinuses,

extending to the iliac trunk. Playfair places phlegmasia dolens as a secondary result of blood clot forming in peripheral vessels. Bouillaud taught that the veins were blocked up with coagula. Schroeder thinks the thrombus of the femoral vein is rarely the primary affection; thrombus with the following of phlebitis and phlegmasia is a sequence—the thrombus results in ichorrhemia, and the disintegration causes embolism. Playfair looks upon the disease as a local manifestation of a general blood dyscrasia.

What causes the coagula? Moxon says it is from a stagnant or arrested circulation. Virchow, that it is a mechanical obstruction, around which it forms. Foyne tells us that there is a morbid state of the blood, a tendency to the deposition of the fibrin, producing a coagulative phlebitis. Simpson puts the phlebitis as due to the obstruction of the veins by coagulated blood, and the coagulation as due to inopexia, or some morbid condition of the lining membrane of the veins. Andral, Gaverret, Becquerel and Rodin considered it to be caused from hyperinosis. Vogel says it is an inopexia, and the lesion caused is thrombosis.

There are many who oppose the view that the veins are involved necessarily. Playfair says clinical facts prove that thrombosis of the veins is not of itself sufficient to account for the phenomena of the disease. Thrombosis in gouty subjects does not cause phlegmasia dolens. Rigby and Fraser of England, Jacquemin of France, Casper and Kirsch of Germany, have reported the veins as healthy. Barker says it is not crural phlebitis. Simpson and Moir contend that the stopping of the veins is not the cause. Barker reports an autopsy, where there was an occlusion by a clot of the right femoral vein, at its union with the internal saphenous; pus escaped in considerable quantity from the cut extremity of the vein; the inside showed a point of ulceration, and a lamina of false membrane covered the wall within. Barker looks upon thrombosis as of service, that it is one of the conservative efforts of nature;

in the same vein Duncan thought the swelling of the limb in phlegmasia was an effort of nature to protect the general system, not to let loose the poison.

The next attributed cause is disease of the lymphatic system. There is an intimacy of connection between the lymphatic system and the uterine function. Busey has called the attention of the profession to the increase of growth in lymphangioma, as it affects the female genitals, during menstrual periods. Our knowledge of the pathological conditions of the lymphatic vessels is as yet very imperfect. Many look on disease of the lymphatic system as a means through which constitutional causes act. Duncan reports a case of white leg occurring in the downward progress of a characteristic case of cancer of the womb. As the phlegmasia diminished, the lymphangiectasis which was present disappeared. Playfair looked upon the case as connected with septic trouble. Cancer of the womb generally affects the lymphatic system—the lymphatics often appear as beautiful nodular cords and net work, and are filled with cancerous material; but cancer seldom develops itself persistently in the walls of the lymphatics. Langham has beautifully illustrated the difference between the net work of the lymphatics and that of cancer cells. Parr proposed to call phlegmasia alba dolens, ecchymonia lymphatica.

Now, if there is a lymphangitis, what is the cause? White said that it was from the child's head pressing the lymphatic vessels, and thus the vessels were ruptured, while Bard could see that labor had but little if anything to do with it. Cases of its occurrence during pregnancy, or parturition, are rare. Tyre could not discover any reason for supposing the lymphatic vessels to be ruptured in labor; he considered that there was a regular inflammation of the lymphatic glands of the side affected. Tilbury Fox believed, and Duncan agrees with him, that inflammation and obstruction of the lymphatic system is the most important etiological factor, and that it is always present. This is a

reiteration of what Duncan taught—that the glands and lymphatics of the limb were evidently the part first and primarily affected. The advocates of this theory are as firm in their statements as Virchow was in his, when he said that the first pathological condition was the formation of a clot in the vein. Hewitt thinks that lymphatic thrombosis is produced by coagulation in uterine sinuses. Virchow and Klob have described a lesion—a puerperal lymphatic thrombosis. Schmidt has found that in diffuse suppurative inflammations the lymphatics become filled with clots. We are taught that in acute inflammations the lymphatics carry from ten to twenty times as much lymph as normally, and the lymph becomes thick and sticky.

Fox says that in phlegmasia alba dolens the lymph is not removed from the affected limb; there is an obstruction, a thrombosis, due to absorption of vitiated fluid. After sudden loss of any kind, there is an inflammatory change in the vessels themselves—the thrombi are caused by extrinsic or intrinsic causes; the latter were inflammatory changes in the vessels themselves, simple thrombosis, a virus action. The cause of phlegmasia dolens, therefore, is a thrombus. The symptoms sequent are from fibrinous deposits in the skin; this cause its peculiar appearances; the swelling is from edema with obstruction of the lymphatics.

Para-uterine lymphangitis is not an idiopathic disease; the pathological and prognostic significance does not so much depend upon its existence merely as upon the nature of the process in which it originates; it may result from inflammatory para-metritis, septic processes and thrombosis of the uterine veins. Even as old an authority as Duncan thought the original cause was the absorption of a fluid not consonant with that which was intended by nature to be conveyed through the lymphatics.

Lymphangitis originates from inflammation, suppuration or the formation of ichor in the connective tissue, it is a

frequent occurrence when the pelvic connective tissue is inflamed during childbed. Niemeyer looked upon thrombosis as the cause. There is no doubt but that inflammation and thrombosis of the lymphatics is frequently met with in the uterus and in the pelvic tissue, and that often the injured portion of the womb, during the puerperal state, may be the starting point. Virchow and Duplay have shown that the walls of the lymphatic vessels may even suppurate. We know that the vessels posterior and lateral to the womb are the most apt to inflame, and it is a strong question whether cases of puerperal phlegmasia alba dolens are not due to inflammation of lymphatic vessels, if they are not in fact often the actual and primary cause.

I know that Barker has said that Fox's theory is ingenious and plausible, but that there is no pathological proof of its truth; that Leishman says no one will now contend that inflammation of the lymphatics, if uncomplicated, will produce phlegmasia alba dolens; that Playfair thinks he never saw a lymphangiectasis in puerperal cases, and does not believe that lymphatic obstruction has more to do in this disease than venous obstruction, and Hewitt thinks both are affected. Yet, in answering the following questions, namely: 1st. Is there a lesion of the lymphatic system? 2d. Is it a structural change in the venous trunks and branches? I believe he who studies the etiology carefully cannot but incline to give an affirmative answer to the first. In the storm of etiological contention it is our most certain harbor. I hope the profession will resume the study of this subject, and that we may in the near future know more of the pathology and physiology of the lymphatic system—that important commissary freight line, that absorbent system which has been aptly compared to a sort of uteri in which the germs of the blood may undergo a quasi incubation.

The treatment of this disease is the same, whatever the theory; thus to-day we echo from our old writers. Dewees wrote that they were unanimous in regard to the treatment,

but they looked upon the condition as inflammatory, and met it with bleeding, leeching and purging. Now we are unanimous, but the treatment is directly the opposite; there is one mode of treatment that in all the mutations has remained unchanged; it is rather treating, as Barker expresses it, the results of the disease than the disease itself; it is the use of bandaging to contract vessels which have lost their power of contractility. There is no doubt that bandages aid the absorption of the effusion, and diminish the size of the limb, and the advisability of this treatment is no longer questioned. The only point is when to use it and how to apply the pressure and what material to use. The fresh skin of animals was once used, and it was supposed to possess a certain advantage outside of the mere pressure. Next, muslin was tried, then flannels, then chamois skins were applied, then silk in the shape of long elastic stockings; but my experience has been so favorable in the use of Martin's rubber bandages that I think it worth while to call the attention of the profession to their application. The use of these bandages has become almost universal; there is no need of describing their mode of application, every surgeon applies them, the general practitioner employs them, and the obstetrician and gynecologist are now trying them, as a utero-abdominal supporter. Below I give one case as illustration:

Carrie M———, aged 25, single, primipara, was admitted to Female Hospital Feb. 8th, 1881. From her history it is learned that she menstruated first at 17 years of age; her menses have always been irregular; her last menstruation was in the early part of July. She has been delicate since, suffered the first two months much from morning sickness. On April 1st her health was much better than it had been for some time preceding. She was delivered on this date of a large boy; pains were good; labor not prolonged; the perineum torn, and united with silver wire sutures; the recovery was perfect. On the eighth day following delivery she was attacked with phlegmasia alba dolens in left

leg; four days afterwards the right limb also suffered; the pain was very severe, so that anodynes had to be used in large doses to in any measure relieve it; rubber bandages were then applied, and the relief from pain was marked and immediate, which differs from what Hervieux says of other bandages; so great was the relief to the patient that whenever the bandages, from any cause, would become loose, she would beg for their hasty reapplication. Under this treatment, combined with tonics in the way of iron, quinine and nux vomica, she made a speedy and happy recovery.

ON SOME SALIENT POINTS OF LIKENESS IN THE LIVES AND CHARACTERS OF JOHN HUNTER AND JOHN HODGEN.

By George Homan, M. D., St. Louis.

[*Read before the St. Louis Medico-Chirurgical Society May 30, 1882.*]

ALTHOUGH divided in respect of their birth by not quite one hundred years, there are yet similarities and points of resemblance in the lives and characters of John Hunter and Dr. John Hodgen that must have an impressive influence on the minds of those who have profited themselves to the extent of even moderate familiarity with the stirring and remarkable history of the former, and whose high privilege it likewise was to enjoy with the latter the advantages of even a brief or incomplete acquaintance. This conviction of inborn and definite resemblance had its starting point with the writer some years ago, and was further strengthened within a twelvemonth by additional though still incomplete study of the record and achievements of John Hunter.

No more inspiring object or fruitful theme can be presented to the eye or mind of a student of science than is

afforded by the contemplation of the characters and careers of these eminent and quickening geniuses, who lived and labored in the cause of science and truth, for the relief of suffering humanity, and the perpetual good of their fellow-men. And when two master minds in the healing art—one of yesterday, the other of to-day—are linked together by salient resemblances in surpassing quality of mental fiber and make-up, vastness of intellectual energy and supreme force of will, the coincidence of likeness cannot be suffered to pass without notice, however weak and unavailing may be the endeavor that would delineate the impression and indelibly engrave the picture on the records of to-day.

The fact that Dr. Hodgen was originally of Scotch ancestry, an extraction that has given to America many of her very ablest men, may serve to furnish an explanation of the resemblance believed to naturally exist between these great minds; and of the close affinity of their parental stock collateral evidence is afforded by the not distant likeness subsisting between Sharp's engraved copy of Reynolds' portrait of Hunter, with which the members of this society are familiar, and the notably strong and clear-cut features of our lamented associate. The characteristic best Scotch traits of sturdiness and manfulness of both mind and body were fully exemplified in Dr. Hodgen.

To trace a merely facial or physical resemblance is not the object of this paper, but the description of Hunter given by Gross in his interesting little work entitled "John Hunter and His Pupils" applies remarkably well to our late fellow member. He says, (p. 29):

"In person Hunter was of middle height, but very strong and robust, with short neck, broad shoulders, and a broad, expansive forehead, denotive of high cerebral development; his brows heavy, his cheeks rather high, and his mouth somewhat underhung"—which latter expression I take to mean that the lips were thin or compressed, and the chin of prominent mold. Gross says further: "He pos-

sessed great powers of endurance and required little sleep. often working with hardly any intermission for nearly twenty hours out of the twenty-four. In his manners he was unostentatious and rather cold and reserved; in his dress plain and simple, and not always particularly neat. * * * Hunter had little taste for society or amusement. He had no idle moments. Minutes and hours were alike precious to him. He never was happy unless he had something to do."

To those who knew Dr. Hodgen the likeness in this description is so striking as to go without saying. To the above is added: "And yet Hunter, ascetic as he apparently was, was by no means insusceptible of social enjoyment. When not too intently occupied he took pleasure in the conversation of his friends, loved to talk to his pupils, and often played with his children, taking a lively interest in their studies and amusements. * * * People who met him only casually, or who knew nothing of his habits, naturally concluded that he was austere and unsociable. His sly humor, however, never entirely forsook him. He was always, even in his later days, fond of a good joke, and of a well-told anecdote." All of which, too, applies equally well to Dr. Hodgen.

The only striking differences in the physical features of the two men were the complexion, hair and eyes. Hunter's eyes and complexion were light, and his hair was inclined to red; in old age it was gray and quite bushy, as is shown by his portrait. Dr. Hodgen's hair, iron gray in his later years, was black, his complexion dark, and his eyes, black as night, were in gaze and expression piercing as a rapier. This variation in type seems probably due to a modified French element engrafted on the ancestral stock in the person of a grandmother on the paternal side, who was of equal French and Scotch blood. The mold of body and mind, however, was distinctly of the best American or Anglo-American type, there being nothing in manner, carriage or expression that would afford a hint of such an admixture.

Hunter is described as being irritable at times, and occasionally tending to give way to violent outbursts of passion. Nothing of this kind, however, can with truth be said of Hodgen. He was pre-eminently the conqueror and ruler of his own spirit. Unquestionably he was by nature ardent and impulsive, but from boyhood even he held himself in check with an iron hand, though that rigorous check never bore on any one but himself. During an acquaintance of over ten years, more than two of which were spent in rather closely associated hospital work, no word of impatience was ever known to escape him, no abrupt or angry act of his was ever witnessed.

Alike in the circumstance of being the sons of poor farmers, alike in the struggles and uncertainties of their younger life, alike in having their attention drawn to the study of medicine, and by nearly identical agencies at the same early age, and vastly alike in their incessant work in the dissecting room, in their passion for anatomy and its complete mastery, with associated surgical instincts and tendencies, alike in early and extensive experience in military surgery, and still alike in the long and disheartening struggle for practice in a large city, these kindred minds grew in stature and breadth, developing and strengthening faculties and qualities that now place them in the very first rank of genius. Gross, in speaking of Hunter's intellectual traits, uses the following language: "Hunter, as might be supposed, was endowed with great reasoning powers, and it may be boldly asserted that there was no man in his day, in any part of the world, who was capable of taking a deeper or a more philosophical view of any subject that engrossed his attention than he. He had an unconquerable love for work, and a passion for original investigation, which outweighed all minor considerations, the fascinations of wealth, the pleasures of society, and the temporary plaudits of his fellow citizens. To these qualities, so essential to success in any great pursuit, he added remarkable powers of generaliz-

ing, an indomitable will, an ardent and unfaltering enthusiasm, and an industry which knew no break or chasm, and which no obstacle could check or abate. * * * During the first ten years of his life he was incessantly engaged in the study of practical anatomy, spending nights and days in the foul air of the dissecting room; and in his maturer years, during which he was encumbered with a large private practice and a daily hospital attendance, he never, unless compelled by sickness, relaxed one hour in his pursuits as an experimenter and as an original investigator. His mind, which was eminently many-sided, was constantly in a state of tension and concentration, incessantly busy, always thinking, forever intent upon the acquisition of new knowledge, forever drawing in new inspiration at every fountain within its reach. Such was John Hunter, a man of vast designs, of noble deeds and of extraordinary genius," and those who knew John Hodgen will remark that his picture is drawn in the foregoing with a fidelity that makes one think his image was in the author's mind at the time it was written.

There are minor parallels existing in their connection with and work in the domain of physiology that might be pointed out, but which cannot be entered upon here. It is in the field of surgery, which science Hunter may be said to have created and established, and which Hodgen so eminently adorned, that their work stands as witness to their respective greatness; but not in the operative performances, or manual details of its practice, which the former viewed as a reflection on the healing art, and which the latter regarded in a conservative light, as simply a means to an end. It was rather in the higher reaches of the science, in the study of surgical pathology and its varied phenomena, in the searching investigation of morbid processes throughout the whole range of medicine, and in the tracing to their rootlets the principles out of which the practice of surgery grew, that their acute and philosophical minds found most congenial employment. For in Hodgen, as in

Hunter, were found clear, practical common sense and sagacious medical judgment, united with the faculty of logical induction and powerful reasoning of the highest Scottish type.

Of their literary work, and its respective extent and value, no comparison can be instituted here. So far as known, Dr. Hodgen's writings have never been collected; indeed, it is doubtful if they could at this moment be approximately enumerated. As regards their style, it can be said that while Hunter never fully overcame the disadvantages of his early education, in consequence of which some obscurity and blemishes appear at times in his writings, Hodgen surmounted all early defects, and, as master of a clear, pithy, pointed, forcible style of expression, has, indeed, few equals and no superiors. He died more than nine years younger than Hunter, and at a time that promised the richest literary fruitage of his maturer years.

His manner of speech was a model in the way of terse, suggestive Anglo-Saxon, devoid of all verbiage, emphatically the language of a man who never spoke unless he had something of value to say, and who then expressed himself in the clearest and most concise terms. In such high estimation was he held, that often his mere silent presence in a medical assemblage would serve to abate or curb pointless and unprofitable discourse.

Of Hunter it is said, "All accounts go to show that he was most patient and painstaking in the investigation of his cases, and most cautious in the expression of his opinions. If he found himself at a loss in determining the diagnosis, he did not hesitate to acknowledge it and ask for further time. He would merely say: 'I cannot tell, at present, what to recommend; I must think of it.'" And this is exactly true of Dr. Hodgen. They were alike in unfailing punctuality to professional engagements, and in their sympathy for, and services to, the poor, who always had the first claim on their attention. In rugged honesty, personal integrity and professional rectitude these men

were as one. While Hunter had the less skillful hand, they each possessed the same ability to completely dominate every circumstance and situation arising in their profession; the same in the quality of reserve force, which, the more it was taxed the more it seemed to abundantly exist. Abounding in resources, the gravest emergencies were met with unruffled calmness, and quietly over-mastered with a coolness, courage and strength, born only of genius, upheld, re-enforced and directed by knowledge, deep and wide, combined with consummate ability and skill.

Of the religious convictions and beliefs held by these men, neither the biographers of the one nor the recollections preserved of the other give any clue. Constrained by their very natures to reject unproven or ill-grounded assumptions of all sorts, honestly preferring always the revelations of reason rather than those of mere credulity or unthinking belief, doubtless they reasoned on this subject as logically as on any other, justly holding that ghostly warrant is in no degree given to anyone to prescribe, visé or audit the beliefs or convictions held by men in this life, that their final and unharmed acceptance in an undetermined hereafter may be thereby assured. So far as known, however, they vouchsafed no expression on this point. From the whole tenor of their lives, it may be inferred that they held it the proper business of no man to inquire, and to this indirect intimation none other than most respectful acquiescence could be given.

A frequent remark of Hunter was that his life was in the hands of any rascal who chose to fret or worry him; one of Hodgen's latest public utterances was that being used to sudden calls he was not afraid of them. Premonitions of their fate were not wanting in either case, and in the final summons death came to them not unlike, almost instantly to one, suddenly to the other, both dying in the midst of their work, full-harnessed in the discharge of their duty. And it is easily conceivable that the end came as they themselves would wish it, for no more intolerable

thought could present itself to the minds of men of their indomitable energy and activity, and enormous capacity for work, than the possibility of their becoming bed-ridden invalids, of languishing helplessly through weeks and months of wasting illness.

No higher tribute to the mental acumen and strength of any man can be paid than to say he resembles John Hunter; and if the avowed belief in a real and visible likeness between the two men whose names appear in this paper has been justified, then its prime object will have been completely attained.

Similar in their striking individuality, alike in their moral grandeur, and withal richly endowed with the choice faculty that could vivify and rouse to efficient action every element and attribute of their gifted minds to the acquisition of useful knowledge, these men in their remarkable attainments, and the ceaseless activity of their lives, tower as monuments for the guidance of all mankind. For, having faithfully cherished throughout their beneficent lives the sacred fire implanted at birth, these luminous intellects will shed their light on the generations of men, not with the fitful, vanishing glare of a meteor, but with the serene, undying radiance of fixed stars set shining forever in the firmament of science and truth. "Their bodies are buried in peace, but their names liveth evermore."

THE RELATION OF PHYSICIAN AND CORONER.

By Hon. Chas. Claflin Allen, St. Louis.

MEDICO-LEGAL questions, when presented, to the physician on the one hand, and to the lawyer on the other, are always vexatious to both, because they involve a knowledge of two sciences widely differing in their nature and in their methods of research. The physician, unfamiliar with legal technicalities, plants

himself on the broad foundation of "common sense," and begins his investigations on purely medical theories; the lawyer, ignorant of therapeutics, presupposing a medical fact as a major premise, adds a proposition of law as a minor premise, and draws his logical legal conclusions. The result, in either case, whether right or wrong, usually works no permanent good, because founded on an uncertain basis. Such an uncertainty would be involved in an abstract discussion of the relations between physician and coroner. The subject suggests at once a Janus face, with a medical aspect and a legal aspect: to the physician intuitively the former appears; to the lawyer, the latter. But in treating practically the question proposed, for present purposes, there is little room for difference in professional theories, since it has reference chiefly to the legal status of the physician in his relation to the coroner, and it is sufficient to consider the matter simply from the legal standpoint, assuming as proven all medical questions essential to the argument, and waiving all rules of medical ethics.

In order to a proper understanding of the coroner's position in the community, it is necessary to bear in mind the origin and general nature of his duties. The office is of great antiquity, and has come down to us through the ages, from the early days of Anglo-Saxon rule in England, as a police regulation.

The coroner is the conservator of the public peace, closely allied to the sheriff, and indeed succeeding to the duties of that officer in certain cases. But his special function has always been to discover and check hidden crimes against the lives of the citizens in his bailiwick; and he has been invested with plenary powers as an inquisitor, to ascertain the causes of mysterious deaths and to bring criminals to justice.

With this special object of the office constantly in view, a clearer conception may be formed of reasons regulating laws laid down by legislatures, which might otherwise

appear purely technical. In a general way, the statutes concerning coroners, following the common law of England, are the same in all the States; but as statute law always supersedes the common, or unwritten, law, it is simpler and safer to confine attention to the statutes of a single commonwealth, as regulating all citizens within its territorial domain.

The Statutes of Missouri provide that a coroner "shall take inquests of violent and casual deaths happening in his county, or where the body of any person coming to his death shall be discovered in his county." (Sec. 5,132.) This power to "take inquests," being vested by statute in the coroner, is exclusive, and, the language being mandatory, devolves upon him, and none other, the duty of enquiring into the cause of death in the classes of cases mentioned.

But the question arises, what are violent and casual deaths? For answer we must look to the ordinary meaning of the words. Except in technical formulæ, the law always seeks to construe language as it is used and understood in the every-day affairs of life.

Turning, then, to the dictionary, the following definitions are found:

1. Violent; produced or effected by force or violence, unnatural.

2. Casual; happening by chance; accidental; fortuitous.

Discarding all etymological and metaphysical distinctions, the intent of the law is confined to two classes, viz:

1st, Deaths from force directed by one person against another, or against himself; and

2d, Deaths from accident.

Theoretically, therefore, it would seem easy to determine when the services of the coroner are required. Indeed the language of the law is apparently so plain as to need no explanation. Granted that a death has happened from violence or casualty, or that the dead body of a person has been discovered in the county, and it follows of neces-

sity that the coroner shall hold an inquest. But the difficulty arises in determining when a death is the result of violence or casualty. It must happen in the experience of every physician that deaths occur, within his knowledge, the cause of which cannot be determined by a diagnosis of symptoms, or an external examination, when the physical injury is internal, or is so complicated with natural disease as to preclude the possibility of a thorough understanding of the case without a post-mortem examination. At such a time the physician is in doubt as to his duty. Shall he proceed to investigate the causes of death himself, or must he notify the coroner?

Again reference is had to the statute law. In Sec. 5,136 it is said: "Every coroner, so soon as he shall be notified of the dead body of any person, *supposed* to have come to his death by violence or casualty, being found within his county," shall proceed to hold an inquest. Since the coroner's duty is defined, "so soon as he shall be notified," it follows that some one must notify him. But who is charged with that duty? Plainly, every citizen cognizant of salient facts. Any other hypothesis would be absurd; and as the law does not presume absurdities, the implication is clear, that *any* person knowing of a death, supposed to have occurred through force or accident, or even suspected of having so occurred, is bound to notify the coroner of facts within his knowledge; and *a fortiori*, the physician who from his professional skill is much more capable of forming a correct opinion as to the cause of death—and this independently of any local city ordinances. If, then, the physician entertain a doubt as to the actual cause of death in cases where he suspects violence, it is his duty to report the case to the coroner. What shall constitute such a doubt cannot be definitely laid down as a rule. The facts of each case, interpreted by the wise discretion of the physician, must govern. Yet it is reasonable to suppose that cases are rare in which circumstances will not point out the proper course to be

pursued. Are there wounds, contusions, abrasions, or other evidences of external violence? Are there symptoms of poisoning, or other appearance of internal force? Are there answers and actions of the patient, his relatives, friends and the bystanders, evasive or suspicious in their character? Are there circumstances attending the time and manner of summoning the physician peculiar in their nature, and out of the ordinary course of practice? Any or all such incidents should put the physician on his guard, to enquire fully into the origin and cause of the patient's condition. It is axiomatic to say that a weak man is more easily killed than a strong one. Yet such an axiom may be very important to consider in many cases. A person recovering from the effects of a severe illness, or suffering from heart disease, or fast dying from phthisis, may receive a blow which, to a person in perfect health, would occasion but a trifling injury, but which to the enfeebled frame of the patient is such a shock as to produce death; and his assailant may be responsible for the result of his act. Whether or not the actual cause of death was the external violence, or the functional organic disease, is not for the physician finally to determine wherever doubt exists. It is sufficient for him to know that violence has been used, which *tended* to produce death. Knowing thus much, a substantial doubt, at least, must be created, which can only be settled by proper legal evidence, to be adduced under the forms of law, and solely within the province of the coroner.

But it may be asked, within what time, if any, an injury conducing to produce death must have been inflicted in order to necessitate inquisition before the coroner. To which it is answered, that so far as the physician's duty is concerned the law fixes no definite time, and the discretion of the physician is again tested. True, the law requires the injury to have caused death within a year and a day from the time of its infliction, in order to convict an assailant of murder. But with this feature the medical pro-

fession have nothing to do. Such a rule might serve as a guide in determining the real cause of death, but would be dangerous in practice, because tending to a usurpation of the coroner's authority, and because the physician, having information entirely *ex parte*, and without the solemnity of an oath, might be imposed upon by designing persons. The distinction between voluntary statements and sworn testimony is plain, and wherever proof is necessary to clear a doubt it must be in the form of legal evidence.

By way of summary, it may be stated, broadly, as the rule, that whenever the dead body of any person supposed to have come to his death by violence or casualty, as already interpreted, is found within the county (or city), or wherever death occurs, which violence or casualty may have tended to produce, in such cases the body of the deceased should be left as first found after death, until the coroner of that county (or city) has been duly notified and has taken charge of the body.

In considering what has been already stated, the fact must not be ignored that a definitive explanation of such a subject is difficult, if not impossible. Both in medicine and law it is necessary to assume certain facts before reaching a medical or legal conclusion, and equally in both sciences the formulation of a generic rule is attended with many contingencies. "Give me certain symptoms or physiological conditions," says the physician, "and I will tell you that the deceased came to his death by violence." "Give me certain incidents and circumstances attending the injury," says the lawyer, "and I will tell you that it was illegally inflicted." Each is as certain as the other, hypothetically, and as uncertain as the other practically until all the facts are developed; and both must rely upon the soundness of their judgment in the interpretation of cases presented, bringing to their aid the Law, which every man is presumed to know, and to know aright.

OTITIS MEDIA AS A SEQUEL OF SMALL-POX.

By Joseph Grindon, M. D., *Physician to the Small-Pox Hospital.*

AMONG the many sequelæ of the eruptive fevers, inflammations of the ear hold an important place. In the treatment of variola, although not so frequently as with scarlatina, the physician is sometimes called upon to meet this vexatious and often dangerous complication.

There have come under my observation, from last November to date (June), 310 cases of small-pox. Otitis media purulenta occurred as a complication in six cases. Among 124 confluent cases it was present four times—about $3\frac{1}{4}$ per cent—all four patients being whites and blondes. In two of these four it followed parotitis; a third had had "running from the ear" on several previous occasions. Among 107 cases of varioloid it was found twice; in one of these, a blonde, it followed an attack of facial erysipelas, this having probably more to do with its causation than the varioloid: the other individual was a negro. All six cases occurred in males, and in all both ears were affected. Among 43 cases of discrete variola and 36 of the hemorrhagic type there was not a single case of this complication, those of the class last mentioned all proving fatal before the sequelæ had had time to appear. One of the six, a boy of seven, died with symptoms of cerebral meningitis—it may have been an extension of inflammation from the tympanum.

Prior to May the only treatment used consisted in syringing with warm water and antiseptic solutions, the instillation of astringent and other washes, with the administration of tonics internally. The results on the whole were unsatisfactory, and the cure always tedious. To say the least, this method of procedure left much to be desired.

Fortunately help was at hand. On opening the Courier for May, I was delighted to find Dr. Todd's able article on

the very subject then occupying my mind, and I resolved to give the dry treatment a trial. Three of the six cases mentioned above have occurred since then. In these three my attention was not called until the appearance of the purulent discharge. Examination revealed perforation—in every case, I believe, below and anteriorly.

The results obtained were of the most gratifying nature. One case which I had been syringing for nearly a month healed under four applications of the new treatment. All did much better than I had hoped. In one case there still exists a small perforation, with partial deafness of that ear. No discharge.

My apology for offering these cases is, that although they are too few to have any weight of themselves, yet they may contribute their mite to the evidence which is already accumulating in favor of the dry treatment.

DISEASES AND DANGERS INCIDENT TO SCHOOL LIFE.—Dr. G. S. Stibbens read before the District Medical Society of Springfield, Mass., a very excellent paper on this subject. Among other matters he calls attention to the dangers arising from improper attention to the calls of nature, especially with reference to the voiding of urine. Serious injury is sometimes inflicted by the compulsory restraining of the desire to pass urine; this leading to the condition known as irritable bladder, when the urine can only be retained in small quantities and for a little while without great discomfort, or sometimes causing incontinence of urine, a condition which is not at all uncommon in children.

He recognizes the liability to imposition on the part of boys who wish to shirk school work, but thinks it were better that ninety-nine boys should secure an unnecessary extra airing than that one should suffer from long-continued organic disease through forced neglect.

He protests, too, against the common practice of keeping children in the lowest grades in stormy weather in continuous session from nine A. M. to one P. M., and omitting the afternoon session so that the children may not have to return in the storm.—*Bost. Med. and Surg. Journal*, June 15, '82.

HOSPITAL AND DISPENSARY PRACTICE.

MISSOURI MEDICAL COLLEGE DISPENSARY.—CHILDREN'S CLINIC.

By Prof. J. P. Kingsley—Reported by F. C. Ameiss, M. D.

Eclampsia.

May 19th.—Arthur H——, æt. 2 months. Was brought to the clinic for the first time April 24th. The mother of child gave following history: Has had spasms since second week after birth, which increased in frequency every day, recurring at present every fifteen to twenty minutes, and lasting from four to six minutes. During the night, when child is asleep, the spasms occur less frequent than in day-time. On inquiry about the condition of the bowels, it was ascertained that constipation existed since beginning of the convulsions, the child going two, three and sometimes four days without an operation. This immediately suggested some derangement of the alimentary canal, which very probably consisted in accumulation of caseous material.

Prescribed for child one grain of the mild chloride of mercury, to be administered in combination with five grains of sugar; and for purpose of relieving the cerebral symptoms one grain of bromide of potassium every hour. The next day the mother reported that the child had not had any convulsions after the powder (calomel) took effect, and that it had a good night's rest—"a better sleep than he ever had since his birth." The mother came back to-day with her child in full health, expressing her gratitude for her restored darling.

Chorea.

May S——, age 11 years. Came to clinic three weeks ago. Had been studying hard all winter, sitting up late at night to get lessons for next day. Especially much studying was she doing at that time, as she was preparing for examination. She was in an anemic condition on calling at the clinic.

The first evidence of her trouble was a peculiar expression

of the face, which was noticed by her mother, who accompanied her to the clinic, but which she could not describe very graphically. She said the girl was doing tricks, which was undoubtedly due to contraction and relaxation of facial muscles; this soon extended to the shoulders and arms, and after a week from the appearance of the first symptoms of the disease all the muscles of the body seemed to be affected. At her entrance to the clinical department Prof. Kingsley remarked: "A case of chorea." Her arms and hands were in continual motion, crossing one over the other, pulling at the fingers, grasping the dress with the intention, as it seemed, to tear it, etc. The legs and feet were in a similar restless condition; while sitting down, her knees were drawn up, her feet constantly moving about, etc. The face was contorted in the most grotesque manner; for a second there was a blank expression of the countenance, then a squinting of one of the eyes, then a depression of one or the other angle of the mouth, causing the most peculiar grimaces imaginable.

On examination of the heart its sounds were found normal. Rheumatism did not accompany the attack, nor was it preceded by that disease; and it may here be stated that in all the cases of chorea treated within the last year at this clinic only three were complicated with rheumatism, in two of which the disease followed and in one preceded the attack of chorea.

The treatment resorted to in this case consisted in withdrawal of the exciting cause; the girl was kept home from school, and sent to the country for good and fresh air; she also was to receive good, nourishing diet. She received the following medical treatment:

℞. Liq. potassii arsenit. - - - - - ℥ ij.
Vini ferri amari - - - - - - ℥ iij.

M. S. Teaspoonful three times a day, after each meal.

In this prescription the girl received five drops of Fowler's solution at a dose, which may seem a large dose; but as children bear arsenic well, they may receive almost as large doses as adults. The iron in the above prescription is of service, as it increases the number of the red blood corpuscles which are deficient in every case of anemia.

The girl returned to the clinic once every week for three weeks, and had her medicine repeated each time until May 9th, at which time she was completely restored to her usual health.

MEDICAL CLINIC.

By J. Steer, M. D.

Exophthalmic Goitre.

Case I.—Miss A. Y——, æt. 16 years, blonde, born in U. S., of a nervous temperament, menstruates regularly. Has been a very diligent student at school, and would frequently worry about her lessons. She also spent several hours daily in the study of instrumental music. About two years ago she noticed a slight enlargement of right side of root of neck, and complained also of some cardiac palpitation and slight dyspnea when taking even moderate exercise.

Patient is not anemic, and has a moderate but capricious appetite. There is no exophthalmos, yet the eyes have a peculiarly bright and prominent look. The thyroid gland has continued to enlarge for the past two years, until it is now quite conspicuous, the right lobe bulging forward more than the left. Upon palpation, pulsation is felt and occasionally a thrill.

The action of the heart is very irregular, but a valvular murmur can not be detected. The pulse at times would beat from 80 to 96 for a minute or two, and then at 140 for a few succeeding minutes. The pulse has been frequently examined and often found as high as 160 per minute.

She is easily startled, and the slightest agitation will cause a rather profuse flushing of the face. She complains daily of headache, with throbbing in the temporal arteries, and occasionally of temporary deafness in both ears. The slightest exertion brings on fatigue and some dyspnea.

The patient has been under treatment for several months, but without marked benefit. She was directed to give up her studies, and to take only the gentlest exercise in the open air daily. The medicinal remedies used were digitalis, iron, nux vomica, ergot, and potassium bromide. Tinct. digitalis gtt. x–xx was administered three or four times daily, but without any appreciable effect upon the action of the heart. A better effect was obtained by combining it with potassium bromide; but the best result was obtained from potassium bromide, grs. xv–xx, in combination with fluid ext. ergot, gtt xv–

xx, administered three times daily. The last combination has not reduced the size of the gland, but it seemed to have had a better effect than the digitalis, in regulating the action of the heart, and accords with Fothergill's statement that "Digitalis does not usually yield the desired result which might fairly *a priori* be expected from its action upon the vaso-motor nerves, though it is worth trying." Galvanism was not used.

The interesting features of this case are the absence of exophthalmos, of menstrual derangements, and of anemia.

Paralysis of Musculo-Spiral Nerve.

Case II.—Jno. H. McC., æt. 38 years, single, office-clerk. The patient took four drinks of whiskey in a comparatively short time, and as a result was plunged into a deep slumber for about five hours. When he awoke he found that his head had been resting on the anterior surface of the right arm, and that his forearm felt "dead and numb," and was devoid of sensibility. Upon assuming the erect posture he was astonished to find that neither the wrist nor fingers could be extended, even under prolonged effort of the will. Sensation, however, returned a few hours afterward.

Four days after the onset of paralysis he presented himself for treatment. The hand and fingers were in a position of almost extreme flexion, with total loss of extension.

In the affected muscles a response was produced to the faradic current, which, in addition to massage, was employed daily. One electrode was placed over the origin of the extensor muscles near the external condyle of the humerus, while the posterior surface of the fore-arm was stroked with the other. After the second faradization, he was able to extend the wrist slightly, but not the fingers.

After the fourth faradization there was some improvement in extension of the fingers. Extension in both wrist and fingers continued to improve daily until the thirteenth day of treatment, when he was enabled to extend both wrist and fingers completely and to resume his former occupation.

Dr. T. Gaillard Thomas has been persuaded to resume his former position as clinical professor of diseases of women in the College of Physicians and Surgeons of New York.

EDITORIAL.

REMOVAL OF THE UTERINE APPENDAGES IN CASES OF PAIN, INTRACTABLE HEMORRHAGE OR REFLEX NERVOUS SYMPTOMS.

Lawson Tait presented at the International Medical Congress a table of all the operations performed by him for the removal of the uterine appendages, which was quite severely criticised by Dr. Matthews Duncan. He defends himself in a well-written paper in the *New England Medical Monthly*, in the course of which he speaks as follows: "I don't think there is a single serious operation which in its earliest days had a result so completely satisfactory as to be completely successful in 80 per cent of cases, and seeing that we have now arrived at a very much more complete knowledge of the essentials for success in abdominal surgery than we had five years ago, I think I am quite within the bounds of probability when I say that in the future this operation will in all probability have a mortality of less than 5 per cent." He speaks here of the operation for the relief of hemorrhage due to myomata.

We give herewith an analysis of the table as given by the author himself:

Cases Operated upon for Pain:	Total Cases.	Incomplete Operation.	Deaths.
Recurrent Hematocele	1	1	0
Abscess of Ovary	2	0	0
Hydrosalpinx	2	0	0
Pyosalpinx	8	0	0
Chronic Ovaritis	8	2	1
Cirrhosis of Ovaries	11	1	0
	32	4	1

Cases Operated on for Hemorrhage:	Total Cases.	Incomplete Operation.	Deaths.
Hydrosalpinx	1	0	0
Chronic Ovaritis (Hypertrophied Ovaries and Tubes)	2	0	0
Small Cystic Ovaries	5	0	0
Myoma	26	1	5
	34	1	5
Cases Operated on for Reflex Symptoms:			
Menstrual Epilepsy	3	0	0
Deformity	1	0	0
	4	0	0
Total	70	5	6

With reference to the second group, Mr. Tait remarks that four of the operations for myoma were performed previous to 1874, when his own experience of abdominal surgery was comparatively limited, and the results in ovariotomy were far less favorable than they are at present. Since 1879 he has operated 21 times with only two deaths, one of which occurred in a woman who at the the time of operating was actually dying of the hemorrhage. He has already acknowledged in print that it was a mistake to operate in this case, and claims that the result should not be recorded against the operation.

In the group operated on for relief of pain, comprising thirty-two cases, four operations could not be completed. Only one operation terminated fatally, and this was due to septic poisoning from direct infection from another patient, caused by inattention to the rules laid down for the management of the hospital.

He has found that many of the troubles which were formerly referred to diseases of the ovaries are due to diseases of the Fallopian tubes.

Mr. Tait alludes to two objections that have been raised against the operation, and gives the answer derived from experience.

The first objection is that removal of the ovaries renders a woman necessarily barren; to which he answers that where the operation has been performed, with very few exceptions, the disease which made it advisable had already nearly or quite destroyed the possibility of maternity. In the few exceptional cases the conditions of the patient, especially epileptics, rendered it a matter of interest to herself, to humanity, and to any possible offspring, that she should not become a mother.

The second objection is that removal of the ovaries would destroy the sexual function, and so prevent a woman from responding to sexual desires. We cannot refrain from quoting Mr. Tait's vigorous expression with reference to this objection before giving the answer of experience. He writes as follows: "It appears to me that no more degrading kind of argument could be used than the expression of such a brutal view as this; that a woman should be denied relief from suffering, which made her life a burden to her, and which was invariably intensified by the act of sexual intercourse, in order that she should be capable of gratifying lust, seems to me an argument which ought not to enter into the minds of honorable men."

Mr. Tait shows, however, that the removal of the ovaries, instead of destroying sexual desire, not infrequently restores it, where it had been destroyed by disease.

He concludes, as the result of all his observation and experience, that this operation is a most effectual means of relieving uterine hemorrhage when not due to cancer and where it has resisted all other means; that its advantage in cases where pain is the prominent symptom is not quite so clear. In cases of pyo- and hydro-salpinx, abscess of the ovary or recurring hematocele the indication is clearly established; when the ovaries and tubes are bound down, as the result of chronic inflammations, in such position as to cripple the patient, it might be easily established. When pain arises from cirrhotic contraction

of the ovaries due to ovaritis, the results are not so sure, and not so much dependence can be placed upon it. One thing to which he calls attention is that it is necessary to remove not only the ovaries but the Fallopian tubes. He believes that as greater experience is obtained we shall acquire data that will enable the surgeon to select cases with greater skill, and so avoid operating upon cases which are not likely to be benefited thereby.

As to the third group, those in which the operation was performed on account of reflex nervous symptoms, he is not so sanguine of successful results, because it will always be more difficult to select cases suited to operation.

His general conclusion is that as experience in operating increases, the mortality will fall to such a rate as will justify this operation as fully as any of the major operations, and that the secondary results in the greater number of cases have been even more successful than had been anticipated.

NATURE OF MALARIAL POISON.

An arrangement has been entered into by the National Board of Health and by the state boards of health of New York, Connecticut, Rhode Island and Massachusetts, for the coöperation of these boards in carrying on investigations as to the true nature of malarial poison, especially with reference to the question whether a definite germ or parasite is to be regarded as the cause of the disease. The experiments of Klebs and Tommasi-Crudelli, and those of Sternberg with reference to the effect upon animals of matters collected in malarial districts, will be repeated and compared with the effect of similar matter from districts where malaria does not exist. The investigations will also include careful researches as to the condition of the blood in those suffering from malarial disease.

The National Board will take charge of the laboratory and experimental work, while the state boards will furnish the material and will collect information in their respective states with reference to the conditions that seem to affect the local outbreaks of the disease, and for this purpose are issuing circulars to the physicians in their respective states. We learn from the Boston *Medical and Surgical Journal* that the Massachusetts Board of Health asks especially that notice shall be sent at once of the appearance of malarial fever in districts where it has been before unknown. The following questions are also asked in this circular, which is addressed to the profession of that state:

1. Has malarial fever in any of its forms prevailed in your town or vicinity during the past year, or does it now prevail?

2. If so, please state—

a The number of cases of which you are cognizant.

b At what season of the year the disease has prevailed.

c Whether the persons so affected reside near any pond, reservoir or stream, and if so, how near, and in what direction?

d How many of the persons included in answers *a*, *b* and *c* have had malarial fever in previous years, and how many have been exposed to malaria in other places?

e Can the disease in any case be traced to the use of drinking water from malarial districts?

3. Has malarial fever been known in your vicinity in previous years?

4. Did it exist the year previous to its appearance in your town, in any town adjacent? If so, please state where and how far away?

5. If malarial fever has ceased to prevail during this or any previous year, state any causes which may appear to you sufficient to explain this relief.

6. What other diseases have been endemic or epidemic in the town at any time during the year?

The investigation of this subject is one of the greatest interest to the whole country, and the peculiar condition of things in the eastern and middle states, where each year now malarial diseases are appearing in localities that have hitherto been free from them, affords a specially favorable opportunity for carrying on the study. Nothing more important can be undertaken by these boards of health, and we shall await the publication of the results of their work with great interest.

INQUIRIES INTO CHEMICAL METHODS IN USE FOR THE DETERMINATION OF ORGANIC MATTER IN POTABLE WATER.

An investigation of very considerable public interest was begun about eighteen months ago at the instance of the National Board of Health by Prof. J. W. Mallet, of the University of Virginia, to test the various chemical methods employed to discover organic impurities in drinking water. A preliminary report on the researches thus prosecuted is given in supplement No. 19 of the *National Board of Health Bulletin.*

Samples of natural waters were solicited and collected from various parts of the country, and three distinct and several processes of chemical analysis for determining organic matter in water were undertaken by three competent chemists, who worked entirely independently of each other. Identical material was submitted to all, which was differently examined on the same day by each one of the observers.

The waters collected were divided into nine classes, which included those believed to be of wholesome nature in regular use by cities, those believed to have caused disease, waters of doubtful or suspected character, and comprising also artificial waters, variously prepared by the addition of determinate quantities of different organic and mineral substances.

The three methods employed or tested were the combustion process, the albuminoid-ammonia process, and the permanganate process, and the report very fairly shows the respective merits and defects of each. The chemical reactions and relations of these various processes are quite fully discussed, and a source of error is pointed out in the combustion process in the loss of carbon (in some cases very great), and the strong tendency to excess of nitrogen from absorption of ammonia from the atmosphere surrounding the gas flame and water bath.

In regard to the albuminoid-ammonia process, among the special conclusions on this point, it is stated that there is a considerable loss of free ammonia resulting from imperfect condensation of this substance during distillation. It was found that sources of error apparently inherent to these two processes were largely susceptible of mutual correction, and by their combination approximations of value could be obtained.

The operations of the permanganate process were conducted in accordance with the Tidy and the Kubel methods, the former involving the use of the acidified permanganate at common temperature, while in the latter it is employed at the boiling point. Imperfections in the results obtained by both methods were exposed in the course of the research, and a special conclusion given in this connection is that the permanganate process is capable of giving more valuable information in regard to a water by watching the progress and rate of the oxidation of organic matter present, than by any single determination of the absolute amount of oxygen consumed in a given time.

The chemists engaged in the investigation were Mr. W. A. Noyes, Dr. Charles Smart, U.S.A., and Dr. J. A. Tanner, U.S.N. A parallel microscopical and pathological inquiry based on the same waters was instituted at the same time, which was con-

ducted by Prof. Martin, of Johns Hopkins University, and some suggestive results were obtained; although the number and variety of such experiments need to be largely increased before generalizations of value can be drawn from them.

The results obtained by all the means of investigation employed were by no means concordant in their bearing, medically condemned polluted waters being in some instances scarcely distinguishable chemically from those nearly free from any evidence of vitiation. The presence of the chlorides as being indicative of sewage contamination in given waters is lightly touched upon, while the presence of the nitrites and nitrates was found to nearly correspond in proportionate quantities to the known sanitary conditions of the waters.

Among the general conclusions drawn, having an hygienic application, it is said that two entirely legitimate directions seem to be open for the useful examination by chemical means of the organic constituents of drinking water, namely: first, the detection of very gross pollution, such as the contamination of the water of a well by accidental bursting or crushing of soil pipes, extensive leakage of drains, etc.; and, secondly, the periodical examinations of a water supply, as of a great city, in order that the normal or usual character of the water having been previously ascertained, any suspicious changes which from time to time may occur shall be promptly detected and the cause investigated. This course would lead to the establishment of local standards of purity for drinking water, which is regarded as of importance.

Inasmuch as the whole investigation has a decided sanitary bearing, and in view of the unevenness or discordance of analytical and other results obtained, it would seem that the following observations on the biological conclusions reached would throw some light on the cause of these discrepancies: "If the theory be accepted, which has so much in its favor, attributing the production of disease by organic matter in drink-

ing-water not to any specifically poisonous substance or substances, but to the presence of living organisms, it seems quite conceivable that a water containing organic matter of any kind, including vegetable matter, may be harmless at one time and harmful at another, when perhaps a different stage of fermentation or putrefactive change may have been entered upon, and special organisms may have made their appearance or entered upon a new phase of existence. * *

BOOK REVIEWS AND NOTICES.

The Science and Art of Midwifery. By William Thompson Lusk, A. M., M. D., Professor of Obstetrics and the Diseases of Women and Children in the Bellevue Hospital Medical College, etc., etc. With numerous illustrations. *New York: D. Appleton & Company.* 1882. 8vo; pp. 687; cloth.

For this work we have only words of commendation. Prof. Lusk has prepared a volume which is not only a credit to himhimself, but is an honor to the profession in America. His descriptions are clear and accurate; his directions for the management of normal or operative cases are alike satisfactory. It can no longer be said that there is no text-book on midwifery by an American author that can stand comparison with those of Playfair and Leishman, of England; Cazeaux, of France, or Schroeder, of Germany. Messrs. D. Appleton & Company are to be congratulated upon having the opportunity of presenting so valuable a volume to the profession, as well as complimented upon the excellent style in which they have done this.

E. M. N.

A Manual of Midwifery. By Alfred Meadows, M. D., London, F. R. C. P., etc., etc., assisted by Albert J. Venn, M. D., M. R. C. P., etc., etc. Fourth edition; revised and enlarged and illustrated with one hundred and thirty-seven wood engravings. *G. P. Putnam's Sons: New York.* 1882. 16mo; pp. 498; cloth.

We have had Meadow's Manual in our library ever since our student days, and have found it a very convenient little work.

The present edition is much enlarged and improved, and it may be safely commended to students and practitioners as an excellent guide for midwifery practice. Its size is such that it can readily be carried about for study in odds and ends of time while waiting for a lecturer or for a patient. E. M. N.

The Experimental Method in Medical Science. Second Course of the Cartwright Lectures of the Alumni Association, College of Physicians and Surgeons, New York. By John C. Dalton, M. D. *New York: G. P. Putnam's Sons.* 1882. 12mo; pp. 108; cloth.

These three lectures discuss first Galvani and Galvanism in the Study of the Nervous System. Second, Buffon and Bonnet in the Eighteenth Century; and third, Nervous Degenerations and the Theories of Sir Charles Bell.

They are historical sketches, and are exceedingly interesting, both in matter and manner, as might naturally be expected from Dr. Dalton.

Text Book of Modern Midwifery. By Rodney Glisan, M. D., Emeritus Professor of Obstetrics and Diseases of Women and Children in the Medical Department of the Willamette University, etc. With one hundred and thirty illustrations. *Philadelphia: Presley Blakiston.* 1881. 8vo; pp. 639; cloth, $4.00: sheep, $5.00.

In the preface to this volume the author calls attention to the fact that many years have elapsed since the first appearance of the obstetric treatises of Profs. Meigs, Hodge and Bedford, and that the recent editions of those works have not been so revised as to keep up with the progress of that branch, and to the consequent fact that our American medical colleges have adopted as text-books the works of European writers, especially Playfair, Leishman, and translations of Cazeaux and Schroeder. He offers this book to the profession as one that he thinks will better represent American practice than do these European reprints and translations.

A careful perusal of the volume leads us to the conviction that while it is evidently the work of one who has had a large and wide experience, and whose practice contains little that we are disposed to criticise, yet the volume is not one that is destined to displace the works of Playfair and Leishman, even in our American colleges.

There is in some parts a style of expression which, though perhaps allowable in the class-room, is certainly not commendable in a text-book.

In general, his instructions as to treatment are good, but we think he should be more decided in reference to some particulars; for instance, on page 376, he says: "If it be impossible to pass the catheter, and yet the bladder is so enormously distended that rupture is imminent, I presume that it would be admissible to draw off the urine by aspiration just above the symphysis pubis." We should say, rather, that it is imperative to do so.

Again, we are surprised to see the statement, on page 387, that the ordinary obstetric position in the United States is like the English, on the left side, with the thighs and legs flexed. According to our observation, the most common position in this country is that upon the back, with the knees drawn up.

We should differ from the author in regard to the management of the third stage to this extent. He says: "While the nurse is attending to the infant, the medical man should see to the delivery of the after-birth." We always insist that the nurse shall give her attention to the mother and be ready to assist the physician, if needed, until after the removal of the after-birth. The infant can wait for its washing until the mother is safe and comfortable.

On page 579, in speaking of lactation, Dr. Glisan says: "If, on the contrary, she has insufficient [milk], or *her constitution is tainted with syphilis* [italics ours], * * * she had better employ a wet-nurse, or bring the child up on artificial food, as before directed." Certainly for a woman to employ a wet-nurse for her infant because she herself was tainted with syphilis would be nothing less than criminal. If she be tainted, the probabilities are strong that the infant has inherited the taint, which would likely develop in a form that would be almost sure to infect a healthy nurse.

The publishers have executed their part in the publication admirably. E. M. N.

A Treatise on the Diseases of Infancy and Childhood. By J. Lewis Smith, M. D., Clinical Professor of Diseases of Children in Bellevue Hospital Medical College, etc., etc. Fifth edition. Thoroughly revised.

With illustrations. *Philadelphia: Henry C. Lea's Son & Co.* 1881. 8vo; pp. 836; cloth, $4.50; leather, $5.50; half Russia, $6.00

This edition of Dr. Smith's valuable work has received considerable additions, and some topics are discussed in this which have not been treated in the preceding editions. The work is thoroughly practical in its character, and the treatment is such as has been thoroughly tested. There is no better book on this subject in the English language than this new edition of Dr. Smith's treatise.

A Practical Treatise on the Diseases of Children. By. J. Forsyth Meigs, M. D., and William Pepper, M. D. Seventh edition. Revised and enlarged. *Philadelphia: P. Blakiston, Son & Co.* 1882. 8vo; pp. 1055; cloth, $6.00; sheep, $7.00

That Meigs and Pepper's treatise on diseases of children has reached its seventh edition is evidence enough that it has well filled a want that is felt by every practitioner for a reliable work on that subject.

The authors have carefully revised the whole work in preparing this edition, and have embodied therein the results of their own recent experience, as well as that of other practitioners.

In addition to revising they have somewhat enlarged the volume, adding two or three entirely new sections, and rewriting some others in the light of more recent observations. Perhaps the most important of the additions is the article on food, in which the use of condensed milk is especially considered, and on the whole disapproved of, although they recognize the fact that it has been used successfully, and is thoroughly commended by many excellent practitioners.

A Treatise on Human Physiology; designed for the use of students and practitioners of medicine. By John C. Dalton, M. D. Seventh edition, with two hundred and fifty-two illustrations. *Philadelphia: Henry C. Lea's Son & Co.* 1882. 8vo; pp. 722; cloth, $5.50; leather, $6.50; half Russia, $7.00.

It is only necessary for us to call attention to the fact that in the preparation of this edition of his physiology Dr. Dalton has thoroughly revised it and incorporated into it the results of the most recent investigations. The advances in physiological research during late years have been most active in the studies of the nervous system. Here improved methods of

microscopical examination have enabled those skilled in such manipulations to pursue their researches much further than was possible formerly. It is in this department and in that of embryology where the same improved methods of research have led to similar advances that the greatest changes are found from the former editions of this work.

"Dalton's Physiology" has always been a favorite, and this careful revision will enable it to retain its hold upon the profession.

BOOKS AND PAMPHLETS RECEIVED.

Hygiene in Relation to the Eye. By C. J. Lundy; pp. 8. Gonorrheal Ophthalmia, its Complications and Results; Iridectomy for Artificial Pupil. By C. J. Lundy. Detroit, Mich; pp. 8. Reprint from *Michigan Medical News*. ———Observations on Surgery in Children. By Edward Borck, M. D., St. Louis. Reprint from *St. Louis Medical and Surgical Journal*, Jan., 1882. ———The Constitution and By-Laws of the Kentucky State Medical Society, together with the Code of Ethics of the American Medical Association; an historical sketch of the Society and roll of members.———Announcement of the Woman's Medical College of Baltimore for the session of 1882-1883.———Price List of Chemical and Pharmaceutical Preparations. Richardson & Co. 1882.———Syphilis. By V. Cornil. Translated with notes by J. H. C. Simes and J. W. White, with eighty-four illustrations. Philadelphia: Henry C. Lea's Son & Co. 1882. 8vo; pp. 461; cloth.———Clinical Lectures on Diseases of the Genito-Urinary Organs. By Sir Henry Thompson. Sixth London edition. Illustrated with 73 wood engravings. Philadelphia: P. Blakiston, Son & Co., London; J. & H. Churchill. 1882. 8vo; pp. 175; paper, 75 cents; cloth, $1.25.———Johns Hopkins University Circular, No. 16.———The Treatment of Scars of the Face involving the Eyelids Directly or Indirectly. By Charles Stedman Bull, M. D., New York. Reprint from Transactions of the American Ophthalmological Society, 1881.———Syphilitic Diseases of the Lachrymal Apparatus. By Charles Stedman Bull, A. M., M. D. Reprint from *N. Y. Med. Jour. and Obst. Rev.*, April, 1882.——— Fourth Annual Announcement of the Medical Department of Arkansas Industrial University; session of 1882-83.———Twenty-Second Annual Announcement of the Bellevue Hospital Medical College, 1882-83.———The Mineral Water Controversy. Artificial or Natural. By Carl H. Schultz.——— Papers and Proceedings of the National Association for the Protection of the Insane, at the stated meeting held in New York City January 20, 1882. New York: G. P. Putnam's Sons. 1882. 8vo; pp. 53; paper.———Genital

Renovation by Kolpostenotomy and Kolpoecpetasis in Urinary Fecal Fistules. By Nathan Bozeman, M. D., New York. Reprint from Vol. VI. Gynecological Transactions, 1882.———University of the City of New York Medical Department; Annual Announcement of Lectures and Catalogue; session 1882-83.———Report on Surgery. By W. O. Roberts, M. D. Reprint from the American Practitioner, June, 82.———"Reversion of Type" in the Digastric Muscle of the Human Being. By Charles A. Todd, A. M., M. D., etc. Reprint from the Transactions of the St. Louis Academy of Science. Vol. IV., No. 2.———Atlas of Gynecology and Obstetrics. Edited by Dr. A. Martin, Professor of Gynecology at the University of Berlin. A. E. Wilde & Co., publishers, Cincinnati, O. Nos. VI.-XV.———A Manual of Obstetrics. By A. F. A. King, M. D., Professor of Obstetrics and Diseases of Women and Children, Medical Department of the Columbian University, etc. With fifty-eight illustrations. Philadelphia: Henry C. Lea's Son & Co. 1882. 12mo; pp. 325; cloth.———Chronic Bronchitis; Its Forms and Treatment. By J. Milner Fothergill, M. D., Edin. With numerous illustrations. New York: G. P. Putnam's Sons. 1882. 8vo; pp. 160; cloth, $1.50.———Materia Medica and Therapeutics in Organic Substances. By Charles D. F. Phillips, M. D., M. R. C. P., etc. Edited and adapted to U. S. Pharmacopeia. By Laurence Johnson, A. M., M. D., etc. Vol. II. New York: Wm. Wood & Co., 1882. (Wood's Library.)———Practical Medical Anatomy. A Guide to the Physician in the Study of the Relations of the Viscera to each other in Health and Disease, etc. By Ambrose L. Ranney, A. M., M. D., etc., etc. New York: Wm. Wood & Co (Wood's Library).———Observations on Hemiplegia. By A. D. Rockwell, A. M., M. D. Reprint from the *Medical Record*. New York: 1882. Galvano-Caustic Method in Nose, Pharynx and Larynx. By Dr. J. Solis Cohen, Philadelphia. Reprint from Transactions of International Medical Congress, 1881.———American Medical College Association. Sixth annual meeting held at Cincinnati, O., May 16, 1882.———A Contribution to the Subject of Nerve-Stretching. By Wm. J. Morton, M. D., New York. Reprint from *Jour. of Nervous and Mental Diseases*, Jan., 1882.——— First Aid to the Injured. By Peter Shepherd, M. B. Revised, etc., by Bowditch Morton, M. D., New York; G. P. Putnam's Sons, 1882. 16mo square; cloth, 50 cents.———Manual of Diseases of the Skin, with an analysis of 8,000 consecutive cases and a formulary. By L. Duncan Bulkley, A. M., M. D., etc., New York. G. P. Putnam's Sons, 1882. 12mo; pp. 312; cloth, $1.25.———Lectures on Diseases of Children. By Dr. Edward Henock, New York. Wm. Wood & Company (Wood's Library). 8vo; pp. 357.——— Chronic Bronchitis. Its Forms and Treatment. By J. Milner Fothergill, M. D., Edin., etc. With numerous illustrations. New York: G. P. Putnam's Sons. 8vo; pp. 160; cloth, $1.50.———A Treatise on the Science and Practice of Medicine, or the Pathology and Therapeutics of Internal Diseases. By Alonzo B. Palmer, M. D., LL.D., etc. New York: G. P. Putnam's Sons. 1882. 8vo; pp. 903; cloth, $5.00; sheep, $6.00.

REPORTS ON PROGRESS.

SURGERY.

Muscular Action in the Pathology of Hip Disease.—Dr. A. B. Judson has come to the conclusion that the crowding together of the articulate surfaces by muscular action has no effect in preventing the progress of pathological changes in the articular structures. He has been led to this conclusion largely by the fact that the primary lesions are not usually to be found in the superficial structures that enter immediately into the formation of the joints, but rather in the cancellous texture of the bones. This conclusion, however, casts no doubt upon the utility of the extension treatment, but simply leads to this interpretation of its beneficial action: Aside from the fact that we are compelled, empirically, by reason of its anodyne quality, to use traction, there is ample rational ground for its use. Traction, however applied, is unavoidably accompanied by fixation. The most efficient apparatus for the application of traction is, at the same time, the most efficient means known to surgery for the solution of that difficult problem, the immobilization of the hip-joint; and, finally, immobilization is indicated by every feature of the pathology as revealed in morbid specimens.—*N. Y. Med. Jour. and Obst. Rev.*, July, '82.

A Painful Affection of the Wrist.—Dr. Edward H. Bradford relates three cases of a painful affection of the wrist, the features of which were: pain referred to or most severe at the middle of the carpus; slight swelling; an absence of constitutional disturbance, and with no interference, or but partial interference, with motion of the articulation between the carpus and the radius and ulna. The symptoms were relieved by fixation, and recovery took place finally after a period of rest. Judging from analogy, Dr. Bradford remarks, it seems probable that the cases here reported were similar to a degree to a synovitis of the medio-tarsal joint, described

by Gosselin under the term tarsalgia adolescentium; differing somewhat in their course from the fact that the wrist, a part easily immobilized from the first, and not the tarsus, was affected. Leaving out of account the smaller synovial membranes of the carpus—i. e., those between the pisiform bone and the cuneiform, the trapezium and the metacarpal bone of the thumb, the ulna and the fibro-cartilage at the joint—there are two large synovial sacs, viz., that between the main carpal bones and the radius and cartilage covering the ulna, and that between the main bones of the carpus, of which the os magnum is the larger and central bone. From the symptoms in the cases reported, the author thinks that the inflammation was one affecting this latter synovial sac, and limited to this alone, and that they may therefore be termed cases of synovitis of the carpus.—*N. Y. Med. Jour. and Obst. Rev.,* July, '82.

Urethral Calculus.—Wm. Hailes had in his wards a case of rather peculiar urethral calculus. The patient, a man of forty-five years, suffered from stricture of the urethra, dependent upon an injury received by falling upon a piece of boiler iron several years ago. According to his report of it there must have been some urinary infiltration into the perineal tissues. There was no external wound. At the operation for stricture a very hard, oval-shaped body was found in the urethra at the part that had been injured. An incision was made directly upon the calculus, which was then removed without difficulty. Sutures were introduced, but were subsequently removed on account of slight infiltration. He made a quick recovery.—*Med. Annals,* April, '82.

Hepatotomy. — Dr. Joseph Ransohoff presented to the Academy of Medicine a patient upon whom he had performed the operation of hepatotomy for hepatic abscess. The incision made was several inches in length; the amount of fluid withdrawn was about one gallon; the operation was made with the thermocautery, and was therefore practically bloodless; after the abscess was opened and the contents drained off, the cavity was thoroughly inspected by means of a laryngoscopic mirror, and all broken down material thoroughly removed; constant irrigation of the bladder was made; and the result was

completely successful. This is the second case of hepatotomy for hepatic abscess, Mr. Lawson Tait's being the first.—*Cinc. Lanc. and Clin.,* July 17, '82.

One Hundred and Thirty-Eight Cases of Amputation of the Scrotum for Elephantiasis Arabum.—Dr. Geo. A. Turner reports 136 operations performed by himself and two by Dr. McDonough for the relief of elephantiasis of the scrotum. He resided for twelve years in the Samoan Islands in the South Pacific, where elephantiasis is very prevalent, and thus had remarkable opportunities for observing and practicing upon cases of this sort. He made use of a clamp very similar to those that are used upon the pedicle of an ovarian tumor, only of larger size, the one that he generally employed having an aperture 5x3½ inches; a groove is cut in the center of the upper bar to avoid undue pressure upon the penis. When the operation is to be performed, the patient is placed upon the operating table for at least a half hour before the time, and the tumor is well supported so as to allow the blood to drain from it as much as possible. The clamp is then applied, but loosely, so as not to interfere with the circulation until the patient is thoroughly anesthetized. The upper bar of the clamp is then screwed down closely so as to arrest the circulation completely. A curved flap is then dissected from the posterior part of the neck of the tumor. The tumor is now lowered and allowed to fall forward, and two or three skin flaps are raised from the anterior surface of the tumor. If the penis is superficial it is not necessary to make a special flap for it; but when it is buried deeply in the tissues, as is often the case, a central flap must be made wide enough to encircle the organ when it is dissected up. To do this is the next step. It is best to start from the opening whence the urine escapes, and to cut directly up until the glans penis is reached, when it becomes an easy matter to dissect up the organ from the surrounding tissues. The testicles are then to be dissected up with the cords and held out of the way. A few strokes of the knife then remove the tumor. Bleeding vessels are then to be tied with carbolized catgut as the clamp is gradually loosened. Generally, in large-sized tumors, 20 or 30 ligatures must be applied. After the vessels have all been tied, the flaps are to be adjusted and united with wire or catgut sutures.

Of the operations reported by Dr. Turner, several were for tumors of immense size. One, the first one, measured 30 inches in circumference at the knees, and hung down nearly to the ankles, and weighed 77 pounds. Two others weighed 80 lbs. each, one measuring 40 inches, the other 54 inches in circumference. One attained a weight of 54 lbs. in the course of two years, though they were generally many years in gaining a considerable size. Of the other tumors removed, one weighed over 50 lbs., three over 40 lbs., and the rest varied from 37 lbs. to 7 or 8 lbs. Of the whole number he lost only two cases, one from an obstinate diarrhea, the other from a fever. In these two cases the tumors weighed 10 and 15 lbs. respectively.—*Glasgow Med. Jour.*, June, '82.

MEDICINE.

Sensory Epilepsy.—Dr. Allan McLane Hamilton presents a paper on sensory epilepsy, or that form of epilepsy in which the sensory element preponderates, whether as an aura preceding a motor discharge, or occurring as a part of a paroxysm in which there is little or no succeeding motorial disturbance, but simply a discharge consisting of a preliminary alteration of special sensibility, and an immediate subsequent stage of unconsciousness. In the majority of these cases there is the simplest form of subjective consciousness of sensory impressions, most of the attacks consisting of the primary stages suggested by Jackson, such as a sudden stench in the nostrils, or colored vision; but in two or three instances there has been much more than this, and the phenomena have been quite remarkable. In some cases the occurrence of a transient contraction of the fingers of one hand lent additional interest to the history, especially in regard to localization. In one case the patient's sensory condition was not the dreamy state referred to by Jackson, but there was always an hallucination of taste, the patient declaring that he had tasted copper or some other nauseous substance; and in other cases there were equally striking proofs of the primary involvement of the cortical centers. The occasional occurrence of hallucinations as a part of the

epileptic attack has been mentioned by many authors. Many other writers have furnished cases which began with sensory auræ or hallucinations, but none of them, says Dr. Hamilton, have made a distinct classification of sensory and motorial epilepsy, and but little mention is made of the disease where the paroxysms consist solely of sensory phenomena, the disturbance of motility being absent. He has not, so far, met with cases in which the individual was influenced by his hallucinations to express them by special motor acts before the attack, except in an unimportant way. On two occasions he has been present at the beginning of a sensory attack. In one instance the patient complained afterward that he smelt a horrible stench. Immediately before losing consciousness he carried his hand up to his nose, and immediately afterward became oblivious to everything about him. A similar action was performed by a patient who forcibly placed both hands over his eyes, as it afterward transpired, to keep out a bright light that blinded him. In the light of all that has been done in the localization of cerebral disease, Dr. Hamilton thinks that we should discover, if possible, the part played by the cortical sensory centers in the genesis of such epilepsies. So far, little has been brought forward to connect lesions of the sensory centers with special symptoms. In our pathological discussion of sensory epilepsy the distinction should be made between lesions of the thalamus opticus and those of the cortical sensory zones, for in the one instance the sensory disturbance may be called the essential, while in the other there may be said to be an affection of special subjective consciousness. If an impression upon the organ of sense is sufficiently intense to impress the infra-cortical central censory apparatus (thalamus opticus) centripetally, it does not follow that there need be any implicated alteration of function in the cortical sensory regions. A lesion of the posterior part of the thalamus opticus, for example, may result in blindness—a *mechanical* blindness, if such an expression can be used, though there are exceptional cases reported by Brown-Séquard where even this is not the case—but it will not produce *word*-blindness, a purely psychical defect. There must be some altered cortical function to account for the unmistakable mental operations which permit the individual to recognize the altered sense-states and enter into the involuntary for-

mulation of hallucinations which are afterward remembered. The author therefore does not believe that the disease of the thalamus opticus *alone* plays any part in the origination of the hallucinations. He thinks we may recognize a form of epilepsy of sensorial character, the motorial features being either absent or insignificant; that such sensory manifestations arise from an unstable condition of the sensory cortical centers; that a light grade of sensory disturbance may indicate simply a suspension of inhibition through an exhausted state of the perception centers which are infra-cortical, or a suspension of the influence of the superior cortical centers, in which case the process is more complex, and the result may be the formation of hallucinations.—*N. Y. Med. Jour.*, June, 1882.

Animal and Humanized Vaccine Virus, Used Almost Simultaneously.—Dr. J. L. Cilley reports the following interesting observation: One member of a family had contracted small-pox, and the eruption had appeared before the true nature of the disease was suspected. The patient was then isolated, and the other members of the family, six in number, were vaccinated with bovine virus. Forty-two hours later, for fear the vaccination with the bovine matter might not succeed, the vaccination was repeated, but this time with humanized virus.

The patient with small-pox was the father of the family, 48 years old, and had not been vaccinated since childhood. The others had been re-vaccinated. In three of these the results of the vaccination were negative with both humanized and bovine virus.

In the mother, who had not been vaccinated for several years, the bovine virus was successful. The youngest daughter, about eleven years old, who had two good cicatrices on her arm, had a good result from the humanized virus; while a boy, nine years old, who had been successfully vaccinated with humanized virus four years before, had good results from both kinds of lymph.—*Cinc. Lanc. and Clin.*, July 1, '82.

Remarkable Case of Suppression of Urine.—Dr. Geo. Brereton reports the case of a young girl, 11 years of age, who had always enjoyed good health, except that at eighteen months old she had scarlatina, followed by dropsy of short duration. When

nine years old she was troubled with diminution of the urinary secretion for a short time.

At the first consultation the mother stated that the girl did not pass a normal amount of urine, and complained of pain on micturition with sense of weakness over hypogastric region, increasing to actual pain on lying down. For a week the quantity of urine voided had not exceeded two tablespoonfuls per day, though she ate and drank as usual. A diuretic mixture was ordered and a warm bath morning and evening, with Dover's powder to relieve pain on lying down.

Five days later the condition remained about the same. She had no desire to urinate except when bathed. There was no change in the quantity voided; there was a dull pain over the kidneys and right side, pulse 100, temp. 100°F., tongue clean and very red, urine strongly alkaline, specific gravity normal, no albumen, a few epithelial cells. Under the administration of mineral acids, with chalybeates and a continuance of the bathing and stimulating embrocations over kidneys and bowels, the patient rapidly improved for nine days, but then grew worse again, and in another week was only voiding one tablespoonful of urine daily. During the next month, February 4 to March 2, she voided only from a dram to a half ounce of urine irregularly every third or fourth day, and only manifested a desire to urinate when bathed; no headache, vision unaffected, tongue clean but very red, appetite fair but irregular, average pulse 110, temperature 101.5°F., respirations slightly increased in frequence, bowels regular, patient drank as freely as in health, no dropsy, slight swelling in right groin, with slight pains at intervals. Towards the close of this period there was slight dullness on percussion and auscultation over right lung. The skin continued dry, and rest at night was fair. Treatment consisted in diuretics, baths, friction to the surface of the body, with counter irritation over the kidneys. Iodide of potassium was tried, but could not be borne.

From March 2 to April 2, not a drop of urine was voided. During this time the dullness over the right lung increased; she expectorated small quantities of blood for two or three days at three different times; average pulse 115, average temperature 102°F., bowels regular, took as much fluid into the system as before; no symptoms of dropsy or uremia; spirits

good; always up and playing about the house during the day, though more disposed to lie and rest during the last fortnight. Gradually failing in flesh and strength, skin harsh, dry and sallow, never perspired until permanent improvement took place.

On the morning of April 2 she passed a pint of normal looking urine, and continued to urinate regularly, and improved in appearance and strength thereafter.

The treatment during the last month did not materially differ from that already detailed.—*Canada Lancet,* July, 1882.

[Although Dr. Brereton states that the patient was closely watched, and that it was impossible for urine to be voided without its being known, the circumstances are so remarkable, a patient continuing to drink as much fluid as in a state of health, while having a harsh, dry skin, and no apparent renal secretion, that we cannot but raise the question whether the physisician and mother may not have been deceived. Is it not possible that urine may have been passed, even unconsciously to the patient, when in the warm-baths, which were given regularly twice a day?]—Ed. Courier.

OBSTETRICS AND GYNECOLOGY.

Geranium Maculatum in Uterine Hemorrhage.—Dr. Clifton S. Morse recommends the infusion of geranium maculatum in uterine hemorrhage at the "dodging period," as well as in menorrhagia of younger women. He has also found it of service in cases where there was a persistent post-partum dribbling.—*So. Practitioner*, June, '82.

Pregnancy at Sixty-Two Years.——Dr. W. J. Kennedy reports the case of a woman sixty-two years of age, who was born in 1818, married in 1838, and bore her first child that year. Her husband having died soon after this, she married again in about two years, and by her second husband bore nine children (once twins), and had two miscarriages. After the death of her second husband, she married a third time, and bore to her third husband eleven children, the last one being born Nov. 29, 1880.

During all this time she had menstruated regularly when not pregnant. Her last seven pregnancies, the last but one was a miscarriage, occurred after she was forty-seven years of age.—*Edinb. Med. Jour.,* June, '82.

Phosphate of Lime in Pregnancy.—M. Delattre claims valuable results from the administration of phosphate of lime during the early months of pregnancy. He says that during these months the phosphates disappear almost entirely from the urine, that they are not utilized in the development of the fetus, but are condensed in the bones, whose weight is thereby increased, and upon the surface in the form of osteophytes, which have been wrongly considered the result of an error of nutrition. In the later months, when the fetus is developing rapidly, these reserves are attacked; the bones tend to return to their primitive weight and the osteophytes to diminish gradually, and to disappear during the early months of lactation, having contributed to keep at a normal standard the phosphates of the milk.

This, he says, is the normal condition of things; but in cities, and where the health of the mother is depreciated, she fails to accumulate any such reserve supplies, and supplies from her own tissues the material to construct a puny being that her milk is too poor to nourish. Hence, he recommends to supply artificially the material that is lacking, and has found favorable effects both upon the mother and infant.—*L' Union Méd.,* Feb. 6, '82.

New Operations for Uterine Displacements.—Dr. Jas. A. Adams has proposed and demonstrated to his classes in anatomy an operation for the cure of certain uterine displacements. Shortly after Dr. Adams had spoken of this operation to some of his colleagues and to the anatomy classes, Dr. Wm. Alexander, to whom the same plan of treatment had suggested itself, had the opportunity of putting it to a practical test with a successful result in four cases at the Liverpool work-house, of which he is visiting physician. So the operation seems to have been first worked out and demonstrated on the cadaver by Dr. Adams, but first proved successful by Dr. Alexander, who had worked out the plan without any knowledge of Dr. Adams' studies.

Careful study and dissections convinced Dr. Adams that drawing up and shortening the round ligaments of the uterus will restore that organ to its normal position in the pelvic cavity without the irritation that in many cases attends upon attempts to retain it by means of mechanical appliances.

The operation is performed as follows: The bowels having been cleaned out by a mild laxative on the preceding day and a warm-water enema, an incision two inches in length is made obliquely across the external inguinal ring, and a careful dissection downward, until the pale straggling fibers of the round ligament are exposed and isolated from the inguinal nerve and other structures. When fairly exposed, clearly traced and isolated, they should be grasped by a pair of broad-pointed forceps, as high up as possible—small polypus forceps are suitable—which, following the guidance of the ligament, may be carried well into the abdominal ring. Traction should then be made and the ligament drawn out an inch or more, as may be necessary. Five or six catgut ligatures passed over and under the ligament will secure its attachment to the surroundiag tissues, and then the wound is closed, except at the most dependent part. Antiseptic dressing, strict rest in bed, and the action of the bowels restrained for a few days by opiates should constitute the after-treatment. Of course this operation is not available in cases where the uterine is bound down by adhesions.—*Glasgow Med. Jour.*, June, 1882.

Iodoform in Gynecological Practice.—Dr. Frank P. Foster publishes some clinical notes on the use of iodoform in gynecological practice, especially in pelvic peritonitis and cellulitis of a chronic form. The cases are classified according to the abnormalities ascertained to be present: 1. Cases in which inflammatory action was supposed to exist, or to have existed, but in which the uterus was freely movable without pain. 2 Cases in which the mobility of the uterus was but slightly if at all impaired, but in which motion of the organ was painful. 3. Impaired mobility of the uterus, with little or no pain on moving it. 4. Mobility of the uterus decidedly impaired, with pain on moving it. 5. Uterus nearly or quite immovable, with little or no pain on attempting to move it. 6. Uterus nearly or quite fixed, with decided pain on attempting to move it. 7. Cases of

palpable inflammatory deposit. The most prompt and satisfactory results were obtained in the last group of cases—those of palpable pelvic exudation. Such cases, however, do better, according to the author's experience, under the more usual methods of treatment than those in which the exudation is not capable of detection by palpation, but is inferred to be present from conditions that can scarcely be explained on any other theory. But, while such is the case, it is quite as true, he remarks, that we now and then meet with bulky exudations that prove utterly rebellious to treatment. A good deal depends, no doubt, upon whether the deposit is of recent or of remote formation; and this question it is not always easy to settle in the cases of patients of whose past history we know nothing beyond what we may be able to elicit by questioning them. Taking the seven groups together, it seems to him that the patients progressed more satisfactorily, on the whole, than they would have done without the use of iodoform. It is true, he adds, that in the great majority of them the use of vaginal injections of hot water was prescribed, but it is no less a moral certainty that in many instances they were neglected by the patients. Their proper use being assured, he would esteem the three great remedies for chronic extra-uterine pelvic inflammation in the following order: (1) hot water, (2) iodoform, (3) galvanism. As to the best method of using iodoform in such cases, his preference is for its application to the upper part of the vagina, and his practice is to tampon the whole vaginal canal with wicking. This prevents the application from being washed away with the discharge, and the tampon is often of great service by its mechanical action—steadying the uterus, sometimes exerting a gentle, even distension upon the deposit, and perhaps inducing muscular contraction. These tampons are almost always borne without pain or discomfort, and, from the fact that iodoform is an antiseptic, they may be retained for several days. His custom, is, however, to direct their removal at the end of thirty-six hours. Not the least of their merits is that they effectually shut in the abominable odor of the drug. Used in this way, he has never known iodoform to betray the patient by its odor, although its taste is sometimes complained of immediately, showing that the substance occasionally makes its way into the uterine canal, or else is absorbed by the vag-

ina more promptly than we are accustomed to expect in the case of medicaments introduced into that passage. For occasional use, as an anodyne; in acute cases, in which the patients are not likely to be asked embarrassing questions by strangers, and in which, as well as in cases of vulvar hyperesthesia, it is an object to avoid meddling with the genital canal; also with patients who cannot have continuous treatment by the physician himself, the employment of rectal suppositories is a valuable resource.—*N. Y. Med. Jour. and Obst. Rev.*, Mar., '82.

An Ovarian Tumor with Rare Complications.—Dr. A. P. Dudley and Dr. H. C. Coe, of the house staff of the Woman's Hospital, remark that it is a well-recognized fact that statistics of ovariotomy are among the least satisfactory of any in surgery. For a man to report that he has had so many "successful cases" may mean simply that he has had the good luck to secure a run of uncomplicated ones, such as would have recovered under the hands of any other operator. The public, and even the medical public, are too prone to judge of success by the outward results alone, overlooking the skill, judgment, boldness in meeting emergencies, and the care and anxiety in after-treatment, which a surgeon has bestowed upon a desperate case, and in spite of which it has terminated fatally. To judge of an ovariotomist by the bare statement of the number of his patients who have survived the operation would be most unjust. So varied are the elements which enter into *every case* of ovariotomy, and which render it complete in itself, that it is quite impossible to institute close comparisons, either between individual cases or between the statistics of two different operators. They then give the history of a case that occurred recently in Dr. Thomas's service at the hospital. The patient had a severe illness at the age of sixteen—an acute intestinal trouble of some sort. After that she was always obstinately constipated, and occasionally had severe colic, with vomiting and tympanites, and was said to have passed gall stones on several occasions. When she entered the hospital she had been married twenty years, but had had no children, and for ten years she had not menstruated. Eighteen months before her admission her health began to fail, and she noticed a slight enlargement of the abdomen, attended with severe pain, localized on

the left side. Soon after this she passed several concretions by the urethra, and began to discharge fecal matter and gas by the same channel. The tumor grew slowly, confined almost wholly to the left side, and attended with constant intense pain and marked gastric disturbance. It was tapped shortly before admission, but no fluid was obtained. Dr. Thomas regarded it as uncertain whether the tumor was an ovarian cystoma or a uterine fibro-cyst, but felt that its removal would be quite impossible on account of its complete fixity and firm adhesion to all surrounding parts. He made an incision four inches in length to the left of the median line, this being the most prominent part of the tumor, thus dividing the abdominal muscles. The sac, which was found to be firmly adherent on all sides, was punctured, and a quantity of dark-brownish, colloid material evacuated, with the patient turned upon the side. The external incision was extended to five inches; the cyst opening was also enlarged, and the operator introduced his hand and broke up a number of secondary cysts, removing their contents. The cyst was found firmly adherent to the intestines and pelvic viscera. Accordingly, the edges of the cyst-opening were stitched into the edges of the wound, a Thomas's double drainage-tube being introduced into the sac, brought out at the lower angle of the incision, and held in position by interrupted wire sutures. The patient died on the eighth day. At the autopsy the visceral and parietal layers of the peritoneum were found so firmly united by old adhesions that it was with difficulty that the cavity could be opened at all. The liver was adherent to the diaphragm, anterior abdominal wall, stomach, duodenum, and transverse colon. The spleen was surrounded by old adhesions. The coils of small intestine were adherent to the abdominal parietes, and so firmly glued together that they formed an inextricable mass. The intestines were also adherent to the posterior wall of the bladder, the superior and posterior aspects of the uterus, and to the surface of tumor. Douglas's fossa was entirely obliterated. Upon separating the adhesions near the fundus of the bladder, a cavity of about the size of a hen's egg (diameter one and one-third inch) was found, which seemed to be a portion of the general peritoneal cavity, shut off by adhesions. It was bounded in front by the posterior surface of the bladder, at its upper third, laterally and

posteriorly, by the mass of adherent intestines. This cavity communicated both with the small intestine and with the bladder, in the former case, by two fistulous openings about one-fifth inch in diameter, situated close together, and each leading into a separate knuckle of small intestine. As nearly as could be ascertained, one communication was with the ileum, the other with the jejunum. There were three openings from this false cavity into the bladder, situated side by side, and separated only by narrow bridges of tissue; the largest measured one-third inch in diameter, the others seven and eleven one-hundredths inches respectively. The bladder was thus opened through its posterior wall, near the fundus. The cavity above described contained a mass of soft, yellowish fecal matter, and three hard, black calculi of irregular shape—all too large to have passed, fully formed, through the fistulous openings in the intestines. (Analysis of these calculi showed them to be enteroliths.) The pelves and calyces of the kidneys were much dilated, the renal parenchyma being atrophied and the seat of a chronic diffuse nephritis. No evidence of an acute interstitial nephritis. The dilated pelves contained a dirty, brownish, purulent fluid, having an offensive urinous odor. Both ureters were greatly dilated, the dilation extending along their whole course, the caliber of the right being nearly equal to that of the small intestine. They contained an offensive fluid similar to that in the pelves. The bladder was capacious, its long diameter being $\frac{4}{10}$ in. It contained soft fecal matter, turbid urine, and gas. The uterus was normal. On the right side the adnexa were completely buried in a mass of adhesions. Upon the left side the site of the ovary was occupied by a polycystic tumor, which filled the pelvic cavity and extended upward into the abdomen. Its diameter was one and one-third inch. It was adherent to the small intestines and to the sigmoid flexure, which lay behind it. The upper half of the tumor had a peritoneal covering, while the lower half was devoid of it. The growth was found to be a multilocular ovarian cyst, having one large cavity, the inner wall of which was covered with papillomatous growths. This inner surface was of a black color, and in places was sloughing.—*New York Med. Jour. and Obstet. Rev.*, July, '82. E. M. N.

SOCIETY PROCEEDINGS.

ST. LOUIS OBSTETRICAL AND GYNECOLOGICAL SOCIETY.

Stated Meeting, April 20th—Dr. Maughs, President, in the Chair.

Marital Masturbation.

Dr. S. G. Moses related the following paper:

Mrs. A., æt. 35 years, small stature but well developed, complexion blonde, of healthy parentage, married 10 years, never conceived.

About two years after marriage suffered much from dyspeptic symptoms, which after treatment were relieved. Six years ago complained of pain in the loins, irritable bladder, and some leucorrhea. Catamenia regular, lasting about a week and painless. She suffered much with headache, and had a return of the dyspeptic symptoms and general languor—was rather anemic in appearance. Suspecting some uterine affection, I found, on examination, the uterus anteverted, of natural size and depth, perfectly movable. There existed some endometritis and some engorgement of the uterine cervix—tenderness over left ovary. After the usual treatment these symptoms were relieved, and I supposed the case cured.

About three years since I was again called upon to treat the lady, who was suffering from a train of nervous symptoms, constant noise in the left ear, so much so at times as to produce insomnia. All the dyspeptic symptoms returned; a great feeling of lassitude, and an indisposition to occupy herself in any vocation; the catamenia regular, and lasting the usual time; no leucorrhea, but some pain, or rather burning sensation, on micturition. Uterine examination revealed nothing; but there was some tenderness over the region of left side, extending towards the spine, referred by herself to the kidneys, as she had frequent desire to urinate and increased secretion of urine, which was found to be very acid.

She applied to an eminent aurist, who told her there was nothing the matter with the organ of hearing, and referred her back to me. Under the use of chalybeates, etc., she gradually was relieved of the troublesome tinnitus aurium and other symptoms, and I heard nothing more until about two months ago, when she informed me that for the last two catamenial periods she had menstruated profusely, and that a bloody discharge continued from time to time during the interval of her menses, but at last period was more excessive than the previous one. By the advice of some female friend she had taken tincture of ergot, which afforded her some relief.

March 18th. Back-ache for a week or more, confined to left side, cutting pains in the left iliac region, bowels constipated, has some dyspepsia, complains of lassitude and great debility, anemic in appearance. On examination uterus was found to to be engorged and anteverted, os eroded; along the left uteropelvic ligaments a series of hard nodules, very sensitive, the anterior wall of vagina extremely sensitive, the pressure of depressor almost unbearable. On introducing the probe covered with cotton, there was evidence of endometritis. I applied tincture of iodine to the whole tract; this was followed by faintness and considerable pain, which passed off in half an hour. I gave ergotine, three grains three times a day, and ordered a chalybeate laxative. Under the use of chalybeates she improved rapidly, all hemorrhage was arrested and general symptoms better, but at the return of the menses all the symptoms became aggravated—the hemorrhage returned.

April 2nd. At this time she appears to be improving, but still suffers from some bloody discharge, etc.

I should call your attention to the fact that ever since her marriage she has suffered more or less from a series of nervous symptoms, and that the menses have always been perfectly regular until the last few months. Previous to her marriage, she tells me that her health was perfectly good, and she did not know how it was that now she was so miserable. She is a remarkably pure-hearted and innocent person.

Now for the apparent cause of this condition, which was made known to me about two years since. Finding no cause

in her condition to prevent her becoming pregnant, I questioned her husband, who is apparently a man in vigorous health, quite a fine specimen of manhood apparently, and learned the following facts from him:

That he has never during their whole married life been able to have a complete coition—always, like Onan, spilling the seed. He is a subject of frequent nocturnal emissions, and thus far has been unable to effect a perfect coition. He is under treatment, but I fear that his case is hopeless.

I have called attention to the above case because I believe, indeed I know, that marital masturbation is too common a cause of uterine and nervous diseases—the criminal determination on the part of young married women to avoid impregnation, and the weakness of husbands in yielding to this morbid desire. I feel that it is the duty of every physician to do all in his power to prevent this detestable concubinage; and I hope that these few words, in describing a typical case, may lead to the discussion of the means of preventing, as far as possible at least, some of the causes of uterine diseases.

This is no doubt a case of forced marital masturbation. Here we find a woman who is perfectly healthy, and who has been married for a long time, and yet who has never realized the duties and the rights of married life. She has been subjected to continual efforts at coition, but has never had a successful one. They are a very loving couple, and are most refined in their tastes and feelings. The husband is rather amorous in his desires, and has been making constant efforts, but has never been successful. The patient has been kept in an abnormal state of excitement, until the uterus has become diseased and the general health has become affected. Almost the whole nervous system has been prostrated. I wanted to call the attention of the society to this fact, because I am satisfied that it is not an uncommon habit for persons to try to prevent the result of coitus by preventing the entrance of the semen into the vagina; and I am satisfied that this is one of the great causes of many nervous affections and uterine diseases which we so often meet with in young married women. I have a case under observation of a lady who had one child about three years ago, and she does not wish to become pregnant again. I think the means used to prevent it is the same

as in this case—marital masturbation. I think that it is time that we should take notice of this matter, and endeavor, as far as possible, to prevent it. It is a serious, dangerous and wicked habit, and in my opinion it is always injurious. We know that whenever the laws of nature are infringed, evil results; and whenever the semen is prevented from entering the vagina, evil effects must follow. I think the case is an interesting one. It is a case of unintentional masturbation. Both of the persons are anxious to have children. They have been married ten years and never had a successful sexual intercourse. The husband has frequent dreams and nocturnal emissions. He admits that he has masturbated some, but never to excess. He is a man of high moral character, and the affection of these people for each other is something remarkable, for, generally speaking, cases of this kind end in differences. During the coition he has a premature emission of semen. He doesn't smoke, chew nor drink, has never had gonorrhea, and has no stricture. He uses an appliance of his own to prevent him from lying on his back.

Dr. Gregory.—I was just thinking of a case to which I was called to give a hypodermic injection to a lady who has become somewhat habituated to it. She suffers greatly with pain in the left ovary. She had a child about five years ago, and has had none since. She is in other respects a very healthy woman, and seems to suffer especially at her monthly periods, though she often has paroxysms of suffering between those times. I told her some time ago that I suspected that there was something unnatural in her relationship with her husband; because it appears that when this child was born she was told that if she had another child she would die; and I think it is probable that she has been trying to avoid conception ever since the birth of that child. I don't know what sort of practice is adopted at all. I didn't ask for particulars. I simply stated that I feared her suffering was connected with some unnatural relationship in consequence of her dread of another pregnancy.

Dr. Yarnell.—I became acquainted with two or three cases of that kind that in my opinion were very much like the case reported by Dr. Moses. I recollect one lady whom I attended a good while, and found at last that there was something of

that kind the matter. We all know that if we excite an organ continually and do not gratify the passion, the organ becomes diseased. A man who is impotent cannot continually have connection with his wife without its having a physiological effect on her womb. It will become diseased; there is no doubt of it, and I have no doubt that the illness of this woman may be due to this cause.

Dr. Montgomery.—It is said that one of the causes of hydrophobia is ungratified sexual desire in the bitch.

Dr. Engelmann.—I haven't much to say on this subject; though I have looked the matter up somewhat, I have never been able to follow a case so as to make anything out of it. I have never been able to follow these cases for any length of time. I was somewhat interested in the subject in my earlier days by seeing Dr. Goodell's article. I think there is a great deal of ill effect from trying to avoid pregnancy. I think I have seen a number of uterine and ovarian congestions from that cause. I remember the case of a young married woman who had had one, or perhaps two children, in rapid succession. She then made various attempts to avoid pregnancy, and these efforts were followed by nervousness in the husband, and I think uterine congestion in the wife. But I have never been able to follow these cases for any length of time so as to note any very serious results.

Dr. Coles.—Some years ago, when Dr. Goodell first wrote his paper, in which he directed attention to this subject—very much as Dr. Moses has done to-night—I was impressed very much. I had on hand at the time a couple of patients—husband and wife—who were both suffering with nervous troubles, though they were affected in different ways. The wife was affected, as a great many women are, with cold feet and hands, and had queer dreams and feelings at night; hysteria being a very marked symptom. She would grow rigid without any special cause, and these hysterical attacks did not seem to accompany the menses, which were regular. She had had several children, and was apparently in good health, otherwise than what I have mentioned. While the wife was suffering in this way, the husband, who was a business man and obliged to do a good deal of writing, would often come to me and complain that after writing a certain length of time he could

no longer hold the pen, and he said that the scratching of the pen on the paper was unbearable, so that he was often obliged to lay the pen down and go out and take a walk in the fresh air. Well, having read this paper of Dr. Goodell, I asked them some questions, and he acknowledged that he had come to the conclusion he had enough children, and that he had been in the habit for some time past of taking a napkin to bed with him, and during coition he would withdraw and discharge the semen on the napkin. He said that his wife had not felt satisfied, and that it was unsatisfactory to himself likewise. Well, I advised him to stop that business; that it was better to have more children than to have their health broken down, and I put him on nerve tonics. Some time after that he got a very lucrative position in Colorado or Nevada, and was away some time. When he returned he was completely restored. His wife, who had not accompanied him, had responded equally to the remedies used, and was also quite well. She afterwards had two children, and then stopped naturally. They have been in perfect health since.

Dr. McPheeters.—I have no doubt that this objection that so many women have to multiplying their children, and the abominable subterfuges that they resort to to prevent conception, which is the curse of modern society, is one of the fruitful sources of uterine and nervous diseases in females. I think it affects females more than it does males. It is a crying evil in society; and I have no doubt that in the case Dr. Moses has reported the trouble resulted from ungratified sexual desire.

Obscure Pelvic Abscess.

Dr. Engelmann.—If there is nothing else before the society, I will report a case. It has been my fortune to report cases which, perhaps, were of more interest and value on account of the ill success attending them; and I have another such one to relate. The patient was a weakly, small woman, who had been married eight years, but had no children, although her husband was a healthy man. She had suffered a long time, had been weakly before her marriage, and had become worse since her marriage, and had been treated for pelvic cellulitis. She had been treated by several physicians, and was finally

sent to me as a case of uterine tumor. I made an examination and detected an enlargement about the size of an orange. The tumor was firm, though not very solid, and was not apparently attached to the uterus. It was near the uterus, and could be moved but a little, and it seemed to me that the tumor and the uterus did not move together, I didn't think it was a uterine or an ovarian tumor, and I couldn't positively make out what it was. I thought it might be a fibroid with the pedicle attached to some other part. I thought of the old pelvic cellulitis, and also of a fibroid of the ovary, which had become attached to the uterine wall. I felt satisfied that the trouble was there, and that it would have to be removed, whatever it was. I made an incision, and inserted my hand, and found that something wouldn't give away; it was a tumor about the size of an orange, and was firmly adherent to the floor of the pelvis, near the uterus, but not attached to it. Drs. Prewitt and Hodgen felt of it, and I was satisfied, as I had been before, that it was a cyst containing fluid—a very thick walled cyst. I intended to puncture it, but some of the gentlemen thought it was a fibroid, and prevented me from puncturing it for a time; then we tried to puncture it through the vagina, and we spent some time in trying to perform this, but it was not possible to plunge the needle in without puncturing the peritoneum, so at last I plunged the needle in from the abdomen, and pus came: we found that we had a very old pelvic abscess with very thick walls. The pus was very foul, extremely offensive, and after I had opened the tumor, in spite of all I could do, the pus welled up into the pelvic cavity. The sponges didn't seem to take it up and keep it from flowing into the pelvic cavity. As far as possible we cleansed the cavity with disinfectants, and inserted a drainage tube, through which the pus flowed. There was profuse hemorrhage from some enlarged vessels which we cut, and it was checked with some difficulty. The patient sank rapidly, and died in thirty-six hours with indistinct symptoms. There was no high fever; no intense pain; no distension of the abdomen. The drainage tube answered perfectly. There were none of the ordinary symptoms of septicemia, but I have seen septicemia under so many forms that I suspect it was the cause of death. I cite this case because I have seen quite a number of cases of pelvic abscess recently which have re-

sembled uterine, or rather pelvic tumors, and in this case the resemblance to a tumor was so great that Dr. Hodgen would not consent to my puncturing it when we had it right in our hands with the pelvic cavity open. He insisted that it was a fibroid. I had the trocar, and was about to plunge it in, but he would not consent to my doing it. It was partly in the broad ligament, and attached to the sides and to the floor of the pelvis. We tried to puncture it through the vagina, but this was impracticable; and it was finally tapped through the incision from above. Dr. Hodgen has spoken to me about the case since, and insists that it was unquestionably like a fibroid. I have under treatment a patient with a tumor exactly like this. When she first came to me, I hesitated to pronounce its character. She lived in the territories, and as her husband was going home to leave her here a number of months, he was anxious to know the condition of the case. I dilated the uterus and made an examination in every possible way that I could, but without arriving at a satisfactory conclusion. The case of this patient I think is identical with the case operated upon. Within a few weeks I have seen a number of similar cases; several at the female hospital. Dr. Schenck called me out to see a case of uterine tumor, which turned out to be identical with the case of pelvic abscess, so that I think it may be well to bring this subject up, because it is hardly likely that these cases can be diagnosed through the abdominal wall, if it is so difficult to diagnose them when we have the tumor right in the hand.

Dr. Gregory.—I would like to ask if in these cases it would not be better to wait and watch, and determine what effect these tumors are having, and whether they are increasing or not?

Dr. Engelmann.—I think that under certain circumstances that would be the course to pursue; but in the case of the patient upon which I operated the patient was constantly growing weaker, and had been for years. The tumor was growing very slowly—it had increased a little in size during the few months that I observed her; and judging from the character of the pus which came from it, it was certainly of a very serious character; it was evidently being slowly absorbed: that is the only way to account for her failing health, and rapid pulse of

the patient. There was no other trouble that I could detect, and I considered that to be the cause of her failing health.

Dr. Gregory.—I would like to ask another question; suppose after inserting your needle this mass had proved to be a fibrous tumor with no cavity, would you have proceeded to remove it?

Dr. Engelmann.—No, sir; it would not have been possible.

Dr. Barrett.—How about the sensitiveness of the tumor upon examination?

Dr. Engelmann.—There was no sensitiveness to amount to anything; that is, I don't remember that there was any noticeable sensitiveness.

Dr. Coles.—Did the tumor sag down into the vagina?

Dr. Engelmann.—I don't think it did at all; for we couldn't find a point to introduce the trocar into it from the vagina without injuring the peritoneum.

Dr. Barrett.—What was the reason you couldn't introduce the trocar?

Dr. Engelmann.—We couldn't introduce it without puncturing the peritoneum.

Dr. Maughs.—You say the tumor was attached to the broad ligament, and I don't see how a fold of the peritoneum could get between it and the tumor. I should think it would have been possible to have introduced the trocar through the vagina.

Dr. Engelmann.—We could introduce it, but not without injuring the peritoneum. Dr. Prewitt and Dr. Hodgen both said it could not be done, and refused to do it.

Dr. Maughs.—I don't understand how it is, if the tumor was in the broad ligament, that the trocar couldn't be passed through the vagina without injuring the peritoneum. It certainly would have been the better proceeding in the case; much better than opening the tumor through the incision and risking the discharge of the pus into the peritoneal cavity. The woman died of diffuse peritonitis undoubtedly.

Dr. Engelmann.—Well, it was a fact, as both Dr. Hodgen and Dr. Prewitt will attest. Dr. Hodgen tried to pass the trocar, and said it couldn't be done without injuring the peritoneum. At first he said he could, but on attempting to do it, he said he couldn't.

Dr. Prewitt.—I will say that this was a peculiar case. At first I was inclined to look at it as Dr. Maughs does, but I am satisfied that it was impossible to pass the trocar into the tumor through the vagina without injuring the peritoneum. I thought it could be done; it seems plausible that we ought to be able to do it; but there was something peculiar about this case, and after an examination I was satisfied that it couldn't be done without injuring the peritoneum.

Dr. Engelmann.—We spent about three-quarters of an hour in manipulating; Dr. Hodgen insisting that he could do it, but when I asked him to take the trocar and try, he admitted that it couldn't be done without entering the peritoneal cavity.

Dr. Maughs.—I am satisfied there was a difficulty in the case. We know that usually a trocar passed through the broad ligament into the tumor would not enter the peritoneal cavity; but I have no doubt that there was a difficulty in this case. The fact of the experience of the persons engaged in the operation satisfies me that the case was one of rare difficulty.

Dr. Gregory.—The attached base of the tumor must have been non-peritoneal. The attached portion of the tumor certainly had no peritoneum on it.

Dr. Engelmann.—Well, I don't know how it was; but it certainly was a fact that we couldn't introduce the trocar without injuring the peritoneum. The wall of the tumor was about a third of an inch thick. It did not fluctuate appreciably, and there was a large quantity of fluid in it.

Dr. Gregory.—Didn't there seem to be any connection between it and any other part?

Dr. Engelmann.—No, sir; the uterus was very little enlarged, and was perfectly normal in every other way.

Dr. Gregory.—Did the patient have a decided hectic fever before the operation?

Dr. Engelmann.—No, sir; she had an increased pulse, but did not have perceptibly increased heat.

Dr. Boisliniere.—I wish to remind the gentlemen present of the great difficulty of distinguishing pelvic cellulitis from retroversion of the incarcerated uterus; for instance, in a miscarriage. It is one of the difficulties of gynecology also to distinguish the retroverted uterus from a fibroid, and it is

difficult to distinguish a case of retroverted uterus from a case of hematocele. Dr. Maughs will remember a case of this kind which we saw. It was the case of a lady who had a miscarriage at the fourth or fifth month. I didn't see her at the time, but I learned afterwards there was some difficulty in the passage of the afterbirth, and a great many clots formed. Afterwards she began to perceive an enlargement of the abdomen, and pressure upon the neck of the bladder. On examining her I found the pelvis filled with a large semi-solid tumor. I felt an extension of the tumor over the pubes also. What was it? It had grown too rapidly to be a case of pelvic cellulitis, and being preceded by this miscarriage I concluded that it was a case of hematocele. We had a post-mortem of a young lady who died of miscarriage, and upon opening the abdomen we found clots of blood in the pelvic cavity and Fallopian tube. The blood had regurgitated from the Fallopian tube into the cavity of the abdomen and formed a large clot. Now in the case that Dr. Maughs saw there was a similar history. There had been a miscarriage, followed by difficulty in expelling the placenta, and then there was a very rapid enlargement of the abdomen. The mass filled the cavity of the pelvis and extended very nearly up to the pubes. The difficulty is sometimes very great in distinguishing between pelvic cellulitis and fibroid.

Dr. Barrett.—As a general rule I don't think there is much difficulty in distinguishing pelvic cellulitis and fibroids, especially if you have a reliable history of the case to depend upon. The only difficulty that ordinarily arises, at least the only difficulty that I have encountered in any case that has come to me, was that I had known nothing about it previously, and I was in doubt whether I had a case of pure cellulitis, or a case of fibroid complicated with cellulitis. But the difference between cellulitis and fibroid in ordinary cases is distinctive enough, I think. In the first place, in cellulitis there is evidence of inflammation and great tenderness of the tumor; then again the tumor seems to grow out of the pelvic walls, and not from the uterus, as in the case of a fibroid; besides, great *pyrexia* always characterizes these cases, and is not present in cases of fibroid.

Dr. Engelmann.—The peculiarity of this case was that after

the abdomen was open and we had it in our hands, we could not determine what it was.

Dr. Barrett.—I do not apply my remarks in any way to Dr. Engelmann's case. We know that it is impossible to diagnose some tumors; but I speak in a general way.

Dr. Boisliniere.—I still believe that this was a fibroid that had suppurated.

Dr. Papin.—To illustrate the difficulties that we encounter in diagnosing these abdominal tumors, I might mention a case that was sent to me by a very distinguished accoucheur of St. Louis, saying that the woman was far advanced with a cyst of the left ovary, and he wanted me to examine her, and when necessary to operate. I examined her, and discovered that she was well advanced in pregnancy, sent her home, and the next night she was delivered of a fine baby, weighing nine and a half pounds. Another gentleman, a physician of this city, sent for me in consultation to see his wife, who he said had an intrauterine tumor. He said he had repeatedly passed the sound six, seven or eight inches to the base of the uterus, and all around the tumor, and he wanted me to diagnose it for him. This also was a fetus, and he had gone all around it with the probe, and had not ruptured the membranes. Only the day before yesterday I was called to see a very attenuated, debilitated, anemic woman 48 years of age. Until three months ago her menses have been regular, she says; three months ago she ceased menstruating, nausea came on, the abdomen increased in size and became very painful to the touch. The family physician was called in and made a casual examination, not even passing his hand over the abdomen; made a diagnosis of typhoid fever, and treated her for six weeks for typhoid fever. Her abdomen increased in size, and another physician was called in, and made a bi-manual examination. Finding that the uterus reached above the umbilicus, he made a diagnosis of conception, a blighted conception probably, and that the child was certainly dead. Well, some six weeks ago she sent for me, and I had the benefit of the opinions of the former attendants, and I found that the tumor reached nearly to the umbilicus, and from the fixity and irregularity, and the rapidity of the growth, I was led to believe that this was a malignant growth. I passed a probe into the uterus about five inches. This was

at my second visit, and the physician who had attended her previously accompanied me, and assisted me. Well, we took out a chamberful of little cysts. There was very little hemorrhage accompanying the discharge of these cysts, but she became very much exhausted, and I did not try to remove any more. The abdomen is still as large as ever, and as hard as ever.

ST. LOUIS MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, March 21st, 1882—Dr. Pollak in the Chair.

Pathological Specimens—Heart—Kidneys—Spleen.

Dr. Todd presented under the microscope a preparation of villous cancer of the vagina.

Dr. Glasgow.—I have here a specimen of the heart, kidneys and spleen of a patient who died a few days ago at the hospital. He came in complaining of difficulty of breathing about four months ago, and examination shows an enlargement of the heart; and there was a slight difficulty a few days after his entrance in making water, but this disappeared under the use of remedies. There was dropsy, confined at first to the lower limbs, about the feet and ankles, but gradually it got up higher and higher, disappearing at times under the use of cathartics, but immediately recurring, until at last it invaded the scrotum and the cavity of the chest. There was more fluid in this patient's body than in any other case I ever saw. The scrotum at one time was very large around and very much like the scrotum of a bull—very long. These specimens were taken day before yesterday. Dr. Carson performed the post-mortem, and I call on him to describe what he found.

Dr. Carson.—I found a subject about 60 years of age, well nourished, with the tissues infiltrated with serum from the tip of the toes almost to the top of the head. As the doctor says, the scrotum, penis, and the subcutaneous tissues were all thoroughly infiltrated. The abdominal cavity was distended to its utmost capacity, as well as the left side of the pleural cavity. On making an incision, I found the subcutaneous areolar tissue from an inch to an inch and a quarter in thickness.

I found the pleural surfaces adherent throughout the greater part of their extent. The pericardium was only slightly distended; the quantity of fluid being only slightly above the normal. The heart was enormously enlarged. I didn't open it. On opening the abdominal cavity I found the liver serous, and the spleen atrophied, and upon the surface the fibrinous laminæ you sometimes see described as occurring in chronic congestion of the spleen. The kidneys were also somewhat enlarged and very much congested; and a very interesting point in connection with them was that there was found projecting from the surface of the right kidney what looks more like a ligament than anything else. I made no attempt to follow it to its termination, thinking it would be better to do that here to-night. The left kidney was found floating, attached to a string of connective tissue six or eight inches in length. One of the lungs was entirely compressed—the left lung—and there was also in the cavity a portion of tissue, very much softened and separated from its adhesions, and there was a large cavity, which was entirely empty of fluid of any kind. The apex of the left lung was slightly infiltrated with tubercle, otherwise it was healthy.

Dr. Glasgow.—There was one point of interest to auscultators in the appearance of the mitral murmur. When the man first came in, on the examination of the heart the sounds were very feeble, but perfectly clear, and there was no sign of a murmur. About ten days after the murmur made its appearance and continued up to within three weeks of his death, then it became very feeble. It was evidently produced by the digitalis. I would like some information about these specimens, and especially the kidney. This cord passes through the upper portion of the kidney, but whether it is a vessel or not I am not prepared to say. I hardly think it is, as it seems perfectly solid and not at all pervious. If it is a ligament, it is certainly not a very strong one. I can find no description of a ligament or vessel in this portion of the kidney. It extends into the upper part of the kidney, into the upper pyramids. On the convex side of the spleen is what I take to be a fibrous deposit. We had a spleen similar to this in some respects presented last year, and over the whole convex surface was a fibrinous deposit; it was taken from a syphilitic subject, who

was also subject to softening of the posterior lobe of the brain, due to the infiltration of the vessels of the brain. Other interesting conditions were present also in that case, which I mentioned at the time I presented the specimen. This condition of the spleen occurs in syphilitic subjects, and in persons subject to chronic congestions of the spleen, so far as I have been able to see or learn upon the subject. Rokitanski is the only author who refers to it at all. The liver in this case I will say was much larger than normal, and the surfaces—the convex surface of the left lobe especially—were nodular. The fibrinous or connective tissue was very marked; and upon dissection it proved to be filled with a dark-green fluid.

Tetanus.

Dr. Prewitt.—I wish to report two cases of tetanus, one traumatic, and the other idiopathic. I think perhaps this may be of interest. The first case was that of a gentleman residing on Easton Avenue, who is about 33 years of age. He stuck a tenpenny nail in his foot the 6th day of October, but still he went out to see the "Veiled Prophets'" procession, which occurred two or three days later; he also went to the fair. The wound festered a good deal, and on the seventh or eighth day he drew from the wound a piece of his stocking about a quarter of an inch square. A day or two later the wound ceased to discharge. On the twelfth day he complained of a stiffness of his jaws. He had been going about in the meantime, and got wet through once. One week after he had first noticed the stiffness of his jaws, I think it was, he came to my office and said in a jocular tone that he believed he had the lock-jaw. I insisted on his going home and keeping perfectly quiet. In the evening I went to see him, and found him about the same. I had the greatest difficulty in keeping him quiet. I could scarcely keep him in bed. I put him upon a mixture of chloral and hyoscyamus and five-drop doses of Fowler's solution, which he took every three hours. He got along pretty well for several days, the stiffness not increasing. Meantime Dr. Hodgen saw the case with me and advised that we simply continue the treatment. He gradually improved and recovered in spite of the great imprudences of the man. I had great difficulty in keeping him from attending to business; he would transact more or less

business almost every day; he is a coal dealer and people would come and talk to him. The next case was that of a woman 35 years of age, who had been subject to neuralgia about the face. She was taken with symptoms of lock-jaw, and I saw her two or three days after she first noticed the symptoms. The stiffness of the jaws yielded pretty well to chloral, bromide, etc. I gave bromide of potash, chloral and the extr. of hyosciamus with Indian hemp. I also gave her Fowler's solution. The stomach soon became irritable, and I had to give her chloral per rectum. The jaws yielded to such an extent as to open nearly half an inch, but the difficulty in swallowing became so great that it was unprecedented in my experience. I have seen a great many worse cases of tetanus, but have never seen a case where there was greater difficulty in swallowing. She could scarcely swallow a drop of water, although she could open her mouth nearly an inch. I attempted to pass a tube down her throat in order to feed her, as she couldn't take any nourishment; but the spasms were such that I was obliged to desist. The only alimentation was per rectum, and she finally died from sheer exhaustion, through the inability to swallow anything: of course she couldn't be sustained adequately by rectal injections. This case was idiopathic, so far as I could determine, although she attributed it to the neuralgia about her face. It is possible that all these cases are traumatic if we could get at the truth.

Dr. Pollak.—How much Fowler's solution did you give this woman?

Dr Prewitt.—She took five drops every three hours for several days in succession; and then she continued it for several days longer without any symptoms that I could see indicating the special effects of the arsenic. See seemed to tolerate it remarkably well.

Gross Professorship of Pathological Anatomy.—The Alumni Association of the Jefferson Medical College propose to endow a professorship in the college in honor of Professor Gross. One of the Alumni has promised to give $2,000 when $8,000 shall have been secured from others.

SELECTIONS.

BACILLUS ANTHRACIS.

I have thought that it would probably be of interest to your American readers to learn some facts in connection with the subject of micro-organisms, which have been brought out by the indefatigable perseverance of the eminent Dr. Klein in the course of his investigation of the bacillus of anthrax. The English government was fortunate enough to employ Dr. Klein to repeat the experiments of Pasteur, and to do what he could to advance the etiology of anthrax and to throw light upon the natural history of the organism upon which so much has been written and upon which it appears, judging from Dr. Klein's results, that Pasteur has gained an undeserved amount of praise.

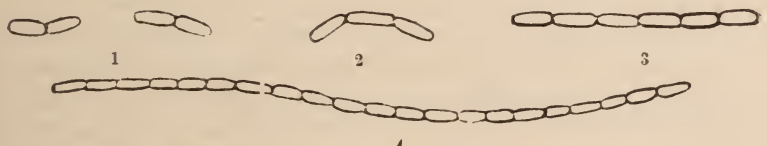
By special appointment, I had the honor of meeting Dr. Klein in his laboratory at the Brown Institute this morning, where he spent four hours showing me his methods and furnished me the facts I give you, which, he said, he was glad to do, especially as the contract he had with the government prevented him from publishing the detailed experiments except through the official bureau, and that is very slow.

In the first place, Pasteur asserted that the bacillus of anthrax could be cultivated in broth, and when cultivated at a temperature below 40°C. it developed itself by spores, and retained all its virulence to produce the disease, but when cultivated in a chamber, kept at a temperature of 43C°., it developed by fission and not by spores. Further, that when it developed at 43°C., and the process was continued for some months, that the bacillus underwent a series of gradations in virulence and that when sufficiently "attenuated" it could be used for protective vaccination.

Dr. Klein confirms the first part of this assertion, viz.: That kept in an artificial cultivating fluid at 43°C. the bacillus of anthrax does not develop spores, but his experiments reach fur-

ther, and prove that the result which Pasteur reached was not due to the temperature alone. Dr. Klein next by an ingenious set of experiments showed that the bacillus of anthrax could be cultivated at a temperature of 25°C., and, under a limited supply of air, would not produce spores. And he also found that the form of bacillus was somewhat altered by limiting the supply of air.

Showing the following gradations by successively limiting the supply:



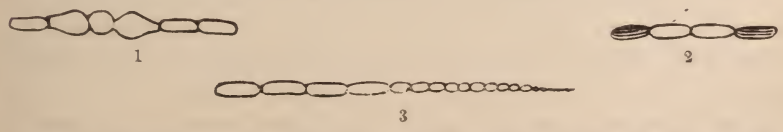
(The above segments, in 1, 2, 3 and 4, are supposed to be of the same size.)

The alterations from limiting the air supply are, first, to increase the number of segments which are joined together, and also to decrease the *physical-vibratile* activity of the bacillus itself.

From a continuation of this process of artificial cultivation in the same apparatus, and without adding more nutrient fluid, he found, after a time, which was between two and three months, that the organism disappeared from the fluid altogether. And by some more indefatigable German industry he has shown that the organism is born, lives a lifetime, produces spores which he thinks stand in the same relation to this bacillus as seeds do to plants, and finally the organism degenerates and dies, and that in a given fluid you can find all ages.

1. Youth.
2. Adult—giving rise to spores.
3. Old age—degeneration and death.

He also shows the forms of degeneration of the protoplasm of the segments of the bacillus to be at least of three kinds.



1st. The segments swell up into globular masses and soon after lose their protoplasm and disappear in the fluid.

2d. Where the protoplasm is gradually dissolved out, leaving only the empty cell membrane behind.

(The result is shown by the fact that the segments do not refract light like others and the membrane is still seen.)

3d. The segments break up into granules which gradually disappear.

(This third way of degeneration is quite distinct from the formation of spores.)

In regard to the virulence he finds that so long as the cultivating liquid contains spores, or a living bacillus, that it will in guinea pigs invariably prodnce the disease with fatal results. And so far as gninea pigs, rats, rabbits and mice are concerned that protective vaccination from artificially cultivated bacilli, no matter what the means of cultivation are, is impossible. And I think I can say that he has proved that the variation of the flnid when inoculated upon *white mice* is due to individual peculiarities of the monse which is being operated upon.

It was from the results which he obtained in the mouse that Pasteur drew his most startling conclusions, and Dr. Klein says these conclnsions of Pasteur are the " merest rubbish."

The experiments continue at the Brown Institute, and in a short time sheep will be used instead of mice, guinea pigs, rats and rabbits, which have constitnted the animals experimented upon up to this time. Dr. Klein has kindly invited me to be present to see the methods and to learn with mine own eyes the results, and it is quite possible that I may have something further to add upon this subject from London.

At the present moment, from the facts I have already given, one thing seems certain, and that is, " war to the knife " between Klein and Pasteur. The former says it will take him at least two years to exhaust the scope of his present labors on anthrax, without allowing for any new points which are certain to arise—while the latter says he has completed the subject of the etiology of anthrax. Fortified by impregnable experiments, I am quite certain that the German will be found on top in the end, and it is time to call *halt* to Pasteur and his enthusiastic followers and bid them to pursue the slow, laborious, yet more worthy example of their German neighbors, and also give credit and honor to whom it is due.

I have given you these few facts because they are fresh and interesting at this time, when so much is being said upon micro-organisms in connection with disease.—*Foreign Correspondence of Cincinnati Lancet and Clinic*, July 15, '82.

SYPHILITIC HEMIPLEGIA.

Dr. Gustav Zinke reported to the Cincinnati Academy of Medicine, Dec. 19, 1881, the following interesting case: The patient was 25 years of age, and had borne five children. He first saw her in October, 1879, when suffering apparently from a suppression of the lochia, having given birth to a healthy child, which died in its eighth month of tubercular meningitis. She recovered slowly. When on her feet again she began to complain of pain in the vulva, and also of very fetid and profuse discharge from the vagina. Examination disclosed a number of chancroids upon the labia, and an intensely red and swollen vagina; the perineum had been ruptured in a previous labor, and there was a partial rectocele; the uterus was in a state of subinvolution; the os patulous, eroded and filled with a purulent discharge. Under the use of copious vaginal injections and the application of calomel to the sores, as well as subsequent applications of iodine, and tampons of cotton with glycerine and tannin to the os, she recovered. She soon returned with symptoms of secondary syphilis, roseola, then a papular acuminated eruption and sore throat, with mucous patches in the mouth. Under mercurial treatment she again seemingly recovered, and became consequently quite strong and assumed her former rotundity of figure. About six months after treating her for the local lesion she again presented herself, this time with a tertiary eruption, ecthyma, upon the integument of the face, temples, scalp, forearms and legs; some in groups, some isolated. Notwithstanding the so-called mixed treatment of mercury and iodide of potassium, new crops constantly developed for at least four months, when they gradually healed off, and once more the woman was discharged. This time, to all appearance, she continued well. She again became pregnant about the latter part of last February. She continued to look and feel

"pretty well" until about ten days before her confinement, when she consulted Dr. Zinke concerning a persistent headache upon the right side of the head, which had troubled her for more than two months past, but had never before been so severe. Being otherwise in fair condition, the doctor ordered potass. bromid ʒj and tr. belladonnæ gtt. xx, to be taken every morning and evening, with very good effect.

Nov. 29th, at 5.30 A. M., after a normal labor lasting some six hours, she was delivered of an apparently healthy female child. No appearance of disease in the placenta. In the evening, though she felt well, the temperature was 102° and the pulse 115, full and regular. Her skin was very warm and wet with perspiration; the expression of her face was good, appetite fair, tongue not coated, no pain anywhere except a slight tenderness immediately over the uterus; abdomen not distended nor tender to the touch, and the lochia flowed freely. Ten grains of quinia were administered. She passed the night quietly. Temperature at 8 A. M. next day was 100°. Another ten grains of quinia were given. General condition about the same as the night before. In the evening the temperature had fallen to normal; she felt well and all seemed serene, but to make sure and prevent another rise in temperature five grains of quinia was ordered; but the mother firmly objected, saying that after each tablespoonful she had given the patient's right arm became paralyzed. On close examination it was found that there was still a want of ability to move that extremity with the natural freedom. The hand was with difficulty raised to her head, nor could she close it as firmly as the other. There also was paresis of the right side of the face; tongue deviated, I thought, slightly to the right; the eyes could be closed; no strabismus, pupils normal; no headache. She would answer every question intelligently; there was no marked alteration in articulation; but the indifference toward everything and everybody on her part caused, for a moment, doubt that these symptoms were real, for at times none of the paralytic symptoms could be noticed; that they had come on each time a little while after the medicine had been given, and this was credited with having caused them.

Being familiar with the history of the patient, Dr. Zinke then inquired more particularly about the headache from which she

suffered prior to her confinement. He learned that occasionally, while sitting at the table eating, or, perhaps, being engaged in social chat with her family, she would suddenly raise up her head, turn to the right, with all the muscles twitching on that side of the face, and exclaim, with a muffled and indistinct voice, "Oh, my! what is this?" These paroxysms were noticed about five or six times in all during the last two months of pregnancy. Under the circumstances no more quinia was given. The following day no change, except that the paresis was more marked in the face and arm; no fever. On the fourth day, the paralysis was very distinct; the right lower extremity participated, and the urine and feces were discharged involuntarily; speech was very much impaired, but no strabismus nor papillary disturbance; patient perfectly unconscious. Consultation was had, and as there was a suspicion of a syphilitic affection of the brain, iodide of potassium was prescribed, but not long continued, as at first the patient refused to take it, and soon was unable to swallow either medicine or food. On the seventh day the paralysis was complete on the whole right side of the body. While the temperature remained normal all this time the pulse was much accelerated. On the eighth day the temperature suddenly rose to 103.5°, pulse to 120. From that time on the patient was very quiet, speech was entirely lost, and she lay upon her bed a living mass without the least voluntary motion or sign until she died on the tenth day after her confinement.

Post-Mortem two days after death. No post-mortem rigidity. Dura-mater separated easily from its bony attachments, *slightly* adherent to the arachnoid of the right hemisphere near the junction of the Rolandic with the longitudinal fissures, running forward from that point about one inch and to the right side about one-half inch. There was more lymph underneath the arachnoid, too, commencing at the junction of the Rolandic with the longitudinal fissure and running forward along the latter to the anterior border of the brain; being about one-half inch in width. There was so much lymph exuded in this region as to give the appearance of a blister and hide from view the convolutions below. Both anterior lobes showed evidences of active inflammation extending exactly from the fissure Rolandi above, running forward to the under surface of the optic

commissure below, behind and outwardly along the Sylvian fissure on both sides, and also dipping into the longitudinal fissure between the hemispheres down to the corpus callosum. The hyperemia was well pronounced over the whole exterior of the brain, both arteries and veins being highly injected, giving the brain an intensely scarlet-red appearance. On the convex surfaces of the hemisphere were also noticed quite a number of small cheesy deposits, which at first were mistaken for spicula of bone, the result of sawing off the calvarium; but upon close inspection they were found to consist of a soft cheesy material. On section it was found that the gray substance had assumed a brownish color, which gave it a dirty tinge; the white substance, too, seemed to be of a darker shade; no evidence of a gummatous tumor could be found; the blood vessels, however, showed decided signs of disease, and the microscope revealed a granular degeneration of the internal coats, which was especially marked in the terminal branches of the middle cerebral artery of the right side and at the base in the circle of Willis. The ventricles were filled to their entire extent with bloody serum, and the cheroid plexuses in the lateral ventricles were also studded with cheesy deposits.

The most interesting feature of the case was the probable origin of the syphilitic infection. The husband had had a chancre two years before marriage (ten years ago now), but was entirely well of it before he married, and has had no constitutional symptoms since, except, perhaps, a non-suppurative inflammation of the right middle ear, with some impairment of hearing and the gradual loss of hair of late, though he has yet quite a crop of it. He is active, well-nourished, and presents no symptoms that would excite suspicion of syphilis. Over three months had passed from the time of the last intercourse with his wife to the time the chancres were discovered which was three weeks after her second last confinement. Dr. Zinke regarded the midwife as the infecting agent, having observed a similar infection in another lady whom the same midwife was attending.—*Cin. Lan. and Clin.*, Jan. 21, '82.

M. Amedee Latour one of the founders, and until within a few months the editor-in-chief, of *L'Union Medicale*, and a distinguished member of the French Academy of Medicine died June 28, 1882.

OBITUARY.

DR. GEO. B. WINSTON.

Another eminent man in the profession of this state has been called away from the work that he did so earnestly and faithfully. Dr. Geo. B. Winston was born in Kentucky, June 9, 1822. He graduated in medicine at the McDowell Medical College in 1846. He served in the Mexican war as lieutenant and surgeon, and during the early California gold excitement he spent some time in that country, but soon returning to this state settled in Jefferson City, where he resided until his death.

A most diligent student, he was never satisfied with what he had attained, but was always eager to learn all that was new. He looked upon our profession as one of extreme responsibility. The following incident, related by a friend of his, shows the earnest devotion to duty which was characteristic of the man. The friend once remarked to him: "Doctor, what necessity is there for this ceaseless labor and study at your time of life?" With a look of astonishment, never to be forgotten, he replied: "My dear sir, I am under bonds to do it. When I offered my professional services to this community, there was an implied covenant on my part that, so far as God gave me strength and ability, I would use them for gathering up and digesting all that has been said or written in regard to the diseases to which human flesh is heir, and if I should lose a patient because of my ignorance of the latest and best experience of others in the treatment of a given case, a just God would hold me responsible for the loss, through inexcusable ignorance, of a precious human life, and punish me accordingly; and whenever I get my consent to be content with present professional attainments, and trust to my own personal experience for success, I will withdraw from the practice, and step from under a

weight of honorable obligations, which, with my best endeavors to meet them honestly and conscientiously, still sometimes are almost heavier than I can bear."

The same friend relates the following incident, illustrating his fortitude:

He was one of the unfortunate excursionists from St. Louis in 1855, on the train that went down through the Gasconade bridge. It was a fearful hour. A terrible storm was raging, black clouds had so obscured the sun that familiar faces could scarcely be recognized except by the flashes of lightning which were blinding by their brightness. Dr. Winston was himself severely wounded, and suffering intensely from pain and faint from loss of blood, he was at last discovered sewing up and dressing his own wound; and when Dr. McDowell said, "Winston, let me attend to you," he replied, "No, Doctor; go where you may save a life. I don't think my wound is fatal."

So far as we have been able to ascertain, Dr. Winston was the first to call attention to the value of gallinaceous pepsin in the treatment of atonic dyspepsia. Though this has been extensively used of late, and with excellent results under the name of "ingluvin," we think due credit has not been given to Dr. Winston for first calling the attention of the profession to it, which he did in a paper read before the state medical association a number of years ago.

Singular Legacy to the French Government. — M. Giffard has left to the French government a singular legacy. He desires that it shall be devoted to the establishment of *suicidaria,* or national institutions, in which persons suffering from painful and incurable affections shall be allowed, by the use of chloroform and other such agents, to terminate their suffering under the direction of medical experts, and with the consent of their friends. M. Giffard secured euthanasia for himself by means of a special apparatus which he devised for inhaling chloroform. M. Renaud has joined the movement for the promotion of painless suicide in France, only stipulating that no man shall be by law entitled to take his own life until he has obtained the consent of his family.—*Brit. Med. Jour.*, June 24, 1882.

ST. LOUIS
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ORIGINAL ARTICLES.

THE TREATMENT OF POTT'S DISEASE EXISTING IN THE UPPER DORSAL AND CERVICAL REGIONS.

BY A. J. STEELE, M.D., ST. LOUIS.

[*Read Before the Missouri State Medical Association.*]

I WOULD treat a case of caries of the spine, existing below the sixth dorsal vertebra, with the ordinary immovable plaster of Paris jacket, extending from over the hips below to the axillæ above. As the case convalesced I would substitute for the immovable plaster a removable leather jacket.

But did the disease exist in the upper dorsal region—above the seventh dorsal vertebra—the same jacket, extending only to the lower axillary border, would not afford efficient support. For, a line drawn between the two axillæ corresponds to the sixth dorsal vertebra, thus the jacket would not support a lesion of this vertebra, scarcely of the seventh. In such case the jacket must be carried higher, even to the base of the neck, if support would be had from it. This

can readily be done by passing the plaster bandage obliquely over the shoulders, the strips crossing each other in the center between the shoulders both in front and behind. A small triangular space will be left uncovered, at the base of the neck, both behind over the spine and in front over the sternum; this space may be covered either by making reverse turns of the bandage, or by using several thicknesses of triangular-shaped pieces of cheese cloth, saturated with plaster.

By thus carrying the jacket higher, firm support will be obtained for four or five additional vertebræ, as high as the fourth or third dorsal

It may be objected that thus the whole abdomen and chest would be encased in plaster, and thereby the obstruction to the breathing be intolerable. And this would be true, but to obviate it the jacket must be shortened, limited below to the edge of the ribs, or nearly so, thus leaving the abdomen free for respiration, and the lumbar spine for motion. If the disease is limited to the middle or upper dorsal region there certainly is no need of restraining the lumbar spine.

We would thus have a thoracic jacket; a solid, close-fitting vest, *a la militaire*, tight up to the neck in front.

I have applied this plaster vest nine times, and am pleased with its action and satisfied with the results obtained.

Dr. Gehrung first suggested and put in practice the idea of this modified plaster jacket, as he stated to this Association in 1878.[1] Others had proposed to cuirasse or confine the whole body (not especially with plaster, but also with other material), but Dr. G. was the first to limit the lower border of the apparatus to the line of the ribs and costal cartilages. He advises that the bandage be drawn very tight, compressing and immobilizing the ribs as thoroughly as possible. I have not found it necessary, nor

[1]See also the St. Louis Courier of Medicine, Vol. IV., p. 495, Dec., 1880.

have I deemed it advisable to use extreme force in this particular. The Doctor also observed, in the case to which he had the vest applied, that if the bandage extended below the line of the cartilages, both costal and ensiform, much suffering ensued, which was relieved by cutting off with a knife and removing the too abundant plaster. I have not experienced the same objection, possibly because I have not drawn the bandage so tight over the lower ribs.

If the spinal disease is above the fourth dorsal vertebra the vest alone is not sufficient, then the additional head rest (as advised by all surgeons when the case is treated by a portable apparatus) must be employed. This, whether consisting of the curved bar and the occipito-mental suspension straps, or of the chin rest, as devised by Taylor and modified by Shaffer, can find the usual attachment to the vest, and thus through it the weight of the head be transmitted to the shoulders. (See Figs. II. and III., taken from life.) This is preferable to employing the ordinary jacket, which confines the abdomen as well as the chest, and transmits the weight of the head indirectly and inefficiently to the hips.

In lieu of plaster of Paris, as a material of which to make the vest, I have, for the past two years, been using sole-leather, which affords both a portable and removable brace. It is true the plaster vest may be made removable by cutting down in front or at the side, and attaching straps and buckles, but it soon cracks, crumbles and weakens, and thus becomes inefficient. The leather is cleanly, it is firm, light, well-fitting, lasting and convenient. Other material may be used in place of leather, such as felt, or paper (hardened with glue and oxide of zinc or silicate of soda). All of these are shaped over a plaster bust or cast of the patient, as it requires many hours for them to harden, longer than the patient could conveniently remain immovably in one position.

The removable leather vest is made by moderately suspending the patient — self-suspension is preferable — the

rope passing over a pulley, one end is attached to the head straps, and the other seized by the patient's hands.[1] This is better than using the axillary stirrups, which draw up or hunch up the shoulders so high as to render the vest ill-fitting when the suspension shall be over. A tight-fitting shirt should previously have been put on the patient, drawn down and fastened between the thighs, one that comes well up to the neck, and preferably with sleeves, even though short. I usually order a male, tight-fitting merino under-shirt, remove the buttons and lapels, and sew up the front. After the shirt is on, if it is smeared with lard as far as the bandage will extend the plaster will not stick on removal; or, on removal of the plaster the shirt may best be taken off with the jacket, as though it were a part of it.

The ordinary plaster of Paris bandage is now applied, extending from the base of the neck above to a circumferential line corresponding to the first or second lumbar vertebra below. It may be thinly applied and without stays. So soon as the plaster is well-hardened it is removed by being cut open in the middle line anteriorly and across in front of each shoulder. I slip a strip of tin or thin steel under the jacket and over the shirt, if it has been greased, under if not, to cut down upon with a strong knife, that there may be no danger of wounding the patient. The jacket being carefully removed, the cut edges are immediately and evenly brought together, and held by encircling the whole with twine. Thus we have a mould which, being placed upright on a board, and the lower crevices stopped with a little plaster, and the arm-holes stopped by placing over them enameled or rubber cloth, and carrying around the whole a bandage, is filled with plaster of Paris mixed to the consistency of cream; less plaster will be required if a central core is made with a few pieces of brick, empty tin cans or bottles placed within the mould. After a few

[1]Oval wooden handles are placed upon the rope, as making it more comfortable for the patient's hands.

moments, when the plaster has thoroughly set, the outer casing may be removed, and there will be found an accurate bust or cast of the patient, over which the leather, or whatever other material may be preferred, can be shaped.[1]

As before remarked, I have been using for this purpose sole-leather, as thick as can conveniently be worked, and preferably half-tanned. Raw-hide, after being soaked and dried, becomes too hard, and is inclined to curl and warp; full tanned hide is often too soft and flexible; thus the medium, half-tanned, is firmer and yet sufficiently pliable. A pattern, in one piece, either of paper or cloth and somewhat of the following shape—

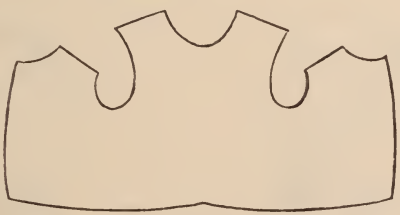

Fig. I. Pattern for Leather Vest.

is fitted to the bust, and from this the leather is cut, not stinted, generous in size, which, after being soaked in water for several hours, over night, is adapted to, and firmly bound on, the cast. Twenty-four or more hours may elapse before it is *thoroughly* dry; then, and *not until*, it may be removed. The irregular edges may now be trimmed, meanwhile the vest being tried on the patient. A dozen ventilating holes, proper distance apart, are cut into it. A half-inch centre bit, the gauge end having been ground off, is the most convenient instrument for making these holes. The outside surface is enameled, with two coats, as tending to strengthen and beautify the vest. The edges are bound with chamois. Hooks, about an inch apart, are attached for lacing—in front of the shoulders and in the median line. The ordinary shoe-hook can be fastened directly

[1] I prefer that the cast be thoroughly dried—in the sun or oven—before the leather is adapted to it, otherwise the latter is very long in hardening.

to the leather by a little instrument found at the "findings" store. Or straps and buckles may be used; or light leather strips containing either hooks or eyelet holes may be stitched near the edges. Tongues are placed under the joining edges, fastened to the under surface of one side half an inch from the edge, made by wrapping a double fold of stiff wigan with chamois, and stitching it with two or three rows lengthwise on the machine.

A head-rest can be attached by riveting a vertical steel bar[1] with thin side-arms to the back of the vest. See Fig. II. To this the other parts of the apparatus can be attached by screws.

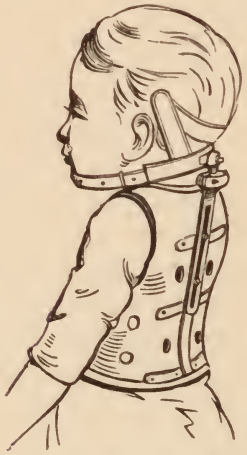

Fig. II.[2] Leather vest, with attached horizontal chin rest. I have added an occipital suspending strap to the lateral uprights.

Fig. III. Leather vest, with attached head suspension, curved steel bar and occipito-mental straps.

If in any case the leather should prove too weak and flexible to afford the requisite support, it could be strength-

[1] In cases demanding it I have used two steel bars, passing down on either side of the boss when it has been prominent.

[2] Taken from a photograph, shows a vest that was worn eighteen months, and yet it is as firm to-day as when first applied. The disease was at the cervico-dorsal junction. It was arrested and the vertebræ consolidated. The general condition improved, and at present the patient is quite well.

ened by riveting to its external surface strips of tin, steel, or brass; but this in my experience has never been necessary.

Should it, for any reason, be deemed advisable to change the shape or contour of the vest, different from the body, it could readily be done by adding to or taking from the plaster of Paris cast. For example, to give more space to the boss or knuckle, additional plaster should be added to that prominence, thereby causing a greater hollowing in the leather, thus avoiding undue pressure and the consequent ulceration. This is my usual custom.

I might say here, parenthetically, that I have put in practice this idea in making corsets for lateral curvature. Wishing to increase pressure on prominent portions of the body, *e. g.*, side of right chest and hip, and to remove it from other opposite portions, I would cut away from the plaster cast in the first instance and add to it in the other, and the corset would likewise be modified.

In some cases it is well each time the vest is reapplied, whether having been removed for the night, or for the purpose of washing the body, that the patient be suspended or be in recumbency. And, speaking of suspension, I like and have adopted the idea of Benj. Lee, of self-suspension of the patient several times daily as a part of the treatment. Patients have been injured by too extreme suspension during the application of the plaster jacket. But such suspension need not necessarily be total; the comfort of the patient may be consulted, and the balls of the feet may usually rest on the floor, sustaining somewhat of weight and steadying the body.

In cases requiring the additional head rest or suspension I prefer, for its attachment, the removable vest to the immovable plaster of Paris jacket, in order that the whole apparatus may be taken off at night; for, in recumbency, it is useless, the weight of the head by position being removed from the affected vertebræ. It, of course, should be reapplied in the morning before arising.

There are cases not suited to the portable apparatus: the child not yet walking; a case too ill to be up; a case in which the local trouble is in an acute inflammatory stage. Recumbency is best suited to all these.

In all cases constitutional treatment must not be lost sight of. Fresh air, sunlight, good diet, tonics are essential.

I would further say, though with danger of repetition, that if the disease is in its comparatively early stage and progressing, and in such region that support could be afforded without the head rest, then I should apply the immovable plaster of Paris vest (if in the lower dorsal or lumbar region the jacket). But if the case was rapidly convalescing, consolidating, I should prefer the removable leather vest or jacket. In all cases needing the additional head-support I should use the leather vest.

I have been thus explicit in describing the means employed in the treatment of these cases, that any practitioner might understand, and make, and apply. In the practice of orthopedics we have been too much under the thraldom of the instrument-maker, who has largely come to think that he can not only make apparatus, but also apply it and treat the case. We do wrong in allowing this. We might as well have him make the splint for, and apply it to, the fractured limb, and attend the case to its termination. His ingenuity and skill are to be commended and *utilized* by the practitioner, but the cases are not to be turned over to him, for he is neither anatomist nor pathologist, nor can he be made responsible. Just as well send a medical case to the druggist to be prescribed for. So often have I heard the physician say, after examining a case: "Well, you have spinal disease; go to the instrument-maker and he will fix you up in an apparatus for its cure." The medical man should not only recognize the disease, but also know the best treatment, and see to it that it is properly applied, and further keep the case under observation until a permanent issue is reached.

IDIOPATHIC SUB-ACUTE LARYNGITIS.

By William C. Glasgow, M. D., *Clinical Lecturer on Physical Diagnosis and Laryngology, St. Louis Medical College.*

[*Read before the State Medical Association.*]

LARYNGEAL disease has not hitherto received from the profession the amount of attention which its importance demands. This is partly due to the fact that comparatively few physicians make use of the laryngoscope, the only means by which morbid conditions of the larynx can be appreciated and recognized, and also to the fact that symptoms which to the expert are characteristic of laryngeal disease are misinterpreted, and their point of origin falsely located. For example, the symptom cough is too often explained by the term bronchitis, or when no morbid condition of the lung or bronchi can be proven, the stomach, the liver or the nervous system is credited with being the offending cause.

A disease of special interest to all, as it is one of the most frequent for which we are consulted during the autumn, winter and spring months, is that known as idiopathic sub-acute laryngitis. This term is used to denote a condition of hyperemia or sub-acute inflammation of the larynx, local in itself and entirely independent of all diathetic diseases, such as phthisis and syphilis. It is strictly to be distinguished from acute laryngitis, as the symptoms and conditions are of essentially different significance: it is often called chronic laryngitis, but its condition, especially when symptoms are present, is always of a sub-acute character.

The pathological condition in this disease is a hyperemia, or a sub-acute inflammation of the laryngeal mucous membrane. This may involve the entire laryngeal membrane, both supra- and infra-glottic, but is most frequently limited to certain parts, the remaining portions of the larynx continuing in a normal condition.

The esophageal surface of the larynx, and more especially the membrane in the inter-arytenoideal space and that over the arytenoid cartilages, is the part most frequently affected. Less frequently the true and false cords, the epiglottis and the infra-glottic region are affected. The inflammation may simply involve the epithelial layer of the mucous membrane, the character of the inflammation denominated catarrhal, or in its intensity it may involve the sub-mucous tissue or even the underlying muscles.

Repeated attacks are apt to leave the membrane thickened or infiltrated with cells, or it may be changed into a more or less fibrinous condition.

In the more recent and superficial forms, the membrane presents a bright red color, and has a moist, velvety, swollen appearance, whilst in the older and more chronic stage the appearance of the membrane is of a dusky red, the surface presenting a more or less glazed, often shining appearance, and in some respects resembling scar-tissue. To the eye these changes in the laryngeal mucous membrane are appreciable when viewed by means of the laryngoscopic mirror.

The causes of idiopathic laryngitis must be sought in atmospheric conditions and in enfeebled vitality of the part. An atmosphere laden with impurities and irritants, and subject to sudden and great variations of moisture and temperature, is especially favorable to its production. An excessive use or a misuse of the voice, both in speaking and singing, will be apt to produce it. That there is always a weakness of the constitution in these cases I do not believe, but we do often meet with a laryngitis of this character as one of the earliest premonitory symptoms of phthisis. It has been said that it is often a sequela of naso-pharyngeal catarrh, that it is caused by the secretions dropping into the larynx. I consider this very doubtful, as the anatomical relations of the parts would forbid it, and would rather consider the morbid conditions of the naso-pharyngeal space and the larynx as results of a common

cause. I would rather explain the seeming connection of these two diseases in the following manner: When the nasal passages, through congestion or inflammation of the mucous membrane, become occluded, respiration is through the mouth, and the atmospheric air is brought directly in contact with the larynx, instead of passing through the nasal cavities, where it is filtered and tempered.

The secretions in sub-acute laryngitis vary greatly in different cases. In some cases the expectoration is scanty or entirely absent, in others we find the characteristic laryngeal sputa; this is a semi-translucent substance greatly resembling boiled starch—it is the product of the glands and more especially of the glands of the ventricles. In the earlier stages it is grayish white or colored by impurities in the atmosphere—hence in cities it is often black from coal smoke; in the later stages the color becomes a greenish yellow. The secretion may be often seen lying on the vocal cords in the shape of pellets, and these are often expelled with suddenness on slight effort. It also collects about the inter-arytenoideal commissure, and in the different fossæ of the larynx. A scanty fibrinous secretion is sometimes seen, which is expectorated with great difficulty; this is especially the case when it lies on the esophageal face of the larynx.

Hemorrhage from the larynx sometimes occurs, but it is very rare, and is always small; it may be due to an erosion or a fissure of the membrane, most commonly in the inter-arytenoideal commissure, or it may be caused by venous fullness of the capillaries.

There are no constant symptoms that characterize sub-acute laryngitis; each case presents special groups, according to the part of the larynx affected. In many cases the disease exists for a long time without symptoms that attract attention, and it is only when it has more fully developed that symptoms are noticed which render the person uneasy. This is often the case when upon an old sub-acute condition some exposure has engrafted a hy-

peremia or more acute attack; in these cases what has hitherto been unnoticed, or but a slight annoyance, becomes a source of discomfort and anxiety.

A sense of tickling may be said to be one of the most common symptoms; this is located over the larynx, in the front or on the sides, and in the supra-sternal notch. The point of irritation, however, is referred by the patient, in many cases, not to the larynx, but low down on the sternum, even as far as the sixth cartilage. According to my experience, this distant location of the sensation is met with in cases where the membrane covering the inter-arytenoid cartilages, or the inter-arytenoideal commissure is the part affected. The tickling is often caused by a pellet of mucus, and is relieved on its ejection; but it is also often due to a hyperesthetic condition of the mucous membrane, which may be irritated by atmospheric conditions or impurities.

A sense of scalding, or a feeling of rawness, is noticed when the esophageal face of the larynx is affected. In these cases there may be a continual clearing of the throat, as an effort to obtain relief. We often find the laryngeal disease connected with gastritis, and the sensation is greatly aggravated by gases from the stomach.

The feeling of fullness is often noticed, and a sensation as if something were lodged in the throat, which necessitates a constant clearing or hawking, and frequent acts of swallowing. This fullness is often so great that it produces a sense of suffocation, and some complain that they feel as if the throat were closing up. It is to be observed, however, that this sensation is not always referred by the patient to the throat, but rather at times to the sternal and even to the infra-clavicular regions. I have noticed this symptom especially in cases of slight edema of the posterior surface of the larynx.

The cough of sub-acute laryngitis varies greatly, depending in a great measure upon the part of the larynx affected: in some cases it is absent, and this is especially

the case when the vocal cords alone are affected. In others, it consists in a simple clearing of the throat, or a slight hack; in many cases it is the most annoying and painful symptom, occurring in violent and persistent paroxysms. The membrane covering the arytenoid cartilages becomes at times exceedingly sensitive, and the cough is continuous and unsatisfactory. When the disease is located in the inter arytenoideal space, more especially in the commissure, we find the paroxysms of coughing most persistent and violent. When pieces of stringy, adhesive mucus become lodged on the esophageal face of the larynx, the cough is often violent and exhaustive; and as the particle lies out of the air current, the patient is often unable to obtain relief until vomiting takes place. When the epiglottis is inflamed, I have sometimes noticed the cough to be metallic in character, somewhat like the cough of hysteria.

It is only in certain cases that we find the speaking voice affected. When the true cords become hyperemic, or inflamed, there is always some change in the voice, varying from slight huskiness to aphonia. When the false cords become swollen, they also impair the quality and tone of the voice. When the disease, however, is located on the posterior surface of the larynx, the speaking voice may remain perfectly normal, and it is only under certain conditions that it becomes affected. A swelling or roughness of the membrane in the commissure may serve as a mechanical hindrance to the proper approximation of the cords, and thus cause hoarseness or even aphonia. An intense degree of inflammation of the posterior surface may also give rise to a paresis of the underlying muscles, the adductor muscles of the larynx. The most common effect, however, is the sensation of fatigue, or an aching of the larynx, produced by prolonged use or straining of the voice: this is especially noticeable in reading aloud or prolonged speaking, or in the effort to sustain a conversation where the pitch of the

voice must be raised, as, for example, in a noisy car or room. The singing voice is more readily affected than the speaking voice, so that we find comparatively slight lesions producing disturbance. This is often felt in the inability to hold a note, and in the sense of fatigue arising from slight effort. The head and falsetto notes are especially affected in inflammation of the cords, whilst the chest notes are modified in inflammation of the posterior surface of the larynx.

Spasm of the glottis, with all its distressing symptoms, is sometimes found accompanying the disease, the spasms being provoked by every exacerbation of the disease, and disappearing with the abatement of the inflammation or hyperemia.

The dependence of certain forms of asthma on a subacute inflammation of the larynx has not been sufficiently recognized. In a paper read before the American Laryngological Society, 1882, I have elaborated this subject, and shown that many cases hitherto called bronchial asthma should more properly be called reflex laryngeal asthma. In these cases it is the inflammation or hyperemia of the larynx, and not of the bronchi, that is the source of the irritation causing the bronchial spasm; the physical signs of spasm, the sibilant râles and the characteristic asthmatic breathing, are in these cases simply reflex phenomena. Relief from the asthma is only obtained when the inflammation or hyperemia of the larynx has subsided. The dyspnea in these cases may be continuous for days, and it is often greatly intensified during the early morning hours; "catching cold" as it is called, causing fresh hyperemia of the larynx, always aggravates and intensifies asthmatic dyspnea.

A peculiar characteristic of this disease is the great amount of mental depression and mental inertia that is found accompanying it in certain cases. The patient, although seemingly in good physical condition, suffers from despondency, complains of inability to fasten his mind

upon his work, and there is entire lack of energy and vigor.

The diagnosis of idiopathic sub-acute laryngitis can only be made accurately by the use of the laryngoscopic mirror; in many cases, however, the symptoms are so characteristic that the history will almost decide it. The differential diagnosis must be to discriminate it from pharyngitis, tracheitis and bronchitis. An inflamed hyperesthetic spot, or follicle in the pharynx, or an elongated uvula, may give rise to somewhat similar symptoms. Too often the uvula has been sacrificed by the unthinking surgeon, when the point of irritation lay far below in the larynx. I do not agree with those who assert that an elongated uvula tends to keep up the inflammation in the larynx. The character of the cough will decide the location of the irritation to the experienced ear, even if the laryngoscope cannot be used, for the naso-pharyngeal and the pharyngeal cough differ in many respects from the laryngeal.

Tracheitis may also be excluded by the character of the cough and absence of characteristic symptoms. An inspection by the laryngoscopic mirror will at once decide the diagnosis. To confound laryngitis with bronchitis should be difficult, but it is in reality one of the most common errors. According to my experience, acute bronchitis in the adult, uncomplicated with emphysema or phthisis, is not so frequent as is generally believed. The large majority of these cases are either laryngitis or tracheitis. The diagnosis of laryngitis must be made from the laryngoscopic appearance, and by the exclusion of the physical signs of bronchial inflammation.

The treatment of sub-acute laryngitis may be given in a few words. First, it is essential that the larynx should have rest. An absolute rest is, however, not attainable, and we must do the best we can in limiting or forbidding the use of the voice. Singing or reading aloud, or any straining of the voice, is especially injurious.

In cases of simple hyperemia, or mild sub-acute attacks, this, with the possible addition of a soothing inhalation, or a cold compress to the larynx, will be all sufficient. In some cases, where the cough is annoying, a mild anodyne mixture will be indicated.

In the severer forms of the disease the larynx must be treated by local applications. These should be made by means of the laryngeal brush, or the spray. The brush is universally applicable, but there are certain cases in which, owing to the anatomical conformation of the throat, the spray will be useless. When strong applications are necessary, the brush must be used.

A wide choice of remedies is afforded in the mineral and vegetable astringents, different cases requiring different applications, according to their varying pathological conditions and the intensity of the inflammation. No fixed rule can be given.

In addition to the topical applications we will find, in many cases, indications for the use of tonic remedies, and it is especially important that the causes producing the disease should, as far as possible, be eliminated. Attention must be given to the condition of the nasal passages, and if obstruction exists, this must be remedied; otherwise, there will be a constant tendency to a return of the laryngal disease.

DIFFERENTIAL DIAGNOSIS OF OVARIAN CYSTS AND CYSTS OF THE BROAD LIGAMENTS BY MEANS OF AN EXAMINATION OF THEIR CONTENTS, WITH A REPORT OF TWO CASES.

By N. B. Carson, M. D.

Read Before the St. Louis Medico-Chirurgical Society, July, 1882.

The value of the different abdominal fluids as an aid in the differential diagnosis of abdominal tumors is a subject that is at present occupying the time and attention of many

surgeons, especially those interested in abdominal surgery. In this paper I shall not enter into a discussion of all the different fluids of the abdomen or the peculiar characters of each, which may enable us to determine the nature of the disease producing them, as I have neither the time nor experience to enable me so to do; but shall confine myself to the consideration of the differences, if any, between the fluid of true ovarian cysts and cysts of the broad ligament —of which the two following cases are examples—and which I present to show of how little value the examination of the fluids proved in the differential diagnosis. Speaking of the different fluids drawn from patients suffering with abdominal dropsy, Sir. J. Y. Simpson, in his Clinical Lectures on Diseases of Women, says: "There are no deductions of any practical import, so far as I know, to be drawn from the contained or evacuated fluid." My experience in the two following cases goes to prove the entire correctness of the above, so far as the differential diagnosis between cysts of the broad ligament and ovarian cysts are concerned. Opposed to the above is the opinion Dr. W. L. Atlee expressed in his work on ovarian tumors —who considered tapping as one of the most valuable aids in our possession in diagnosing ovarian tumors. As he thought, if tapping were resorted to in all cases before undertaking the operation, and the physical, chemical and microscopical character of the fluid duly considered, many patients would be saved a hazardous operation and their surgeon the extreme mortification of a mistaken diagnosis —as he says "one of the best evidences of the existence of an ovarian cyst to be derived from tapping is the character of the fluid as determined by its physical, chemical and microscopical character." He here follows the above assertion with a description of the peculiar characteristics of the fluid which enabled him to say whether it were ovarian or not—which peculiarities were present in both of my cases. It may be urged that Dr. Atlee classed cysts of the broad ligament with ovarian cysts. But we think

the perusal of the chapter on cysts of the broad ligament in his work on ovarian tumors will soon dispel the idea and convince the reader that he considers the two forms of cysts as entirely separate and distinct. In continuing his remarks on the same subject he says: "I know of no other fluid whose physical, chemical and microscopical characters correspond with those of the fluid of an ovarian cyst, and hence, when a fluid drawn from the abdomen possesses the above characteristics it may be considered diagnostic of ovarian disease." We shall see further on of how much value the above assertion proved in my cases.

Drysdale, who, no doubt, has examined more fluids taken from abdominal dropsies than any other living man, and who has, at the same time, devoted more time and attention to the subject than any one man, and who, on that account, ought to be authority, thinks that in all cases he is able to differentiate all abdominal fluids by their physical, chemical and microscopical characters; and in support of this opinion Dr. Thomas said, in a discussion of this subject at a meeting of the American Gynecological Association, that in no case did he fail to find an ovarian tumor where Drysdale had reported the fluid he examined to be ovarian. He, Drysdale, in making his diagnosis, places most confidence in the finding in the fluid of a peculiar corpuscle named after him, the Drysdale corpuscle, which, he says, is present in almost all ovarian fluids and never elsewhere, and which is, therefore, characteristic. This characteristic (?) cell was undoubtedly present in the fluid taken from my first case, and therefore could not be characteristic of ovarian fluid, as in this case the ovary was in no way connected with the cyst, and was moreover perfectly healthy.

In the April number of the *American Journal of the Medical Sciences*, Dr. Edwards, who claims to have examined about three hundred different abdominal fluids from American and European Hospitals, says his investigations lead him to conclude that "the free, delicate, granular

cell" is not at all peculiar to ovarian fluid, but has been found in real cysts by Drysdale himself, and by himself (Edwards) and others, in fluids taken from the scrotum, the pleural cavity and cystic tumors of the neck. The same writer claims to be able to produce this "characteristic corpuscle" at will from pus taken from any part of the body, by keeping it for five weeks at the temperature of the body.[1]

In the same paper we see it stated that Dr. W. F. Atlee was induced to operate upon a case of supposed ovarian tumor because this "granular cell" was present in the fluid, and because the fluid also presented all the other physical, chemical and microscopical characters of ovarian fluid. In spite of all these signs being present, when the abdomen was opened no tumor was to be found. Edwards also gives in his paper a letter to Dr. W. F. Atlee (relating to this subject) from Mallessez, of the College of France, in which the author makes the following statement: "Sometimes I have been able to affirm the existence of a cyst: but often, I must confess it, have I remained undetermined." Now if a member of the College of France, who at the same time possesses the ability, experience and reputation of Mallessez, is compelled to acknowledge his inability to even affirm the existence of a cyst, how much more difficult must it be to determine the exact nature and origin of that cyst from an examination of its contents. In this same paper is also another letter to Dr. Atlee, from Charles Robin, in which the author says: "It is lost time to hunt with the microscope to distinguish the liquids of cysts of the ovary from the liquids of serous cysts; we must have recourse to chemical analysis." We shall see how little the chemical analysis availed me in my cases, as we have already seen of how little service it was in the case of Dr. W. F. Atlee, mentioned above.

[1] This is also the result of the experiments of Dr. H. F. Formard, who stated to Dr. Edwards that after the lapse of several weeks he had found the only specimens of pus used by him crowded with "ovarian cells."

In Edwards' paper, Dr. W. F. Atlee says that he is of the opinion that there is no specific cell in ovarian fluids, any more than there is a specific cancer cell. Dr. Edwards also states that Drs. Braxton Hicks, of Guy's Hospital, London, and W. S. Playfair, of King's College Hospital, London, informed him that they placed no reliance on the cell diagnosis.

In the last edition of Spencer Wells, just out, we see the following: "It is to be regretted that the service afforded to our diagnosis of abdominal fluids by assisted sight is not much better than uncertain." Now this assertion is made after the completion of one thousand cases of ovariotomy, and, coming from the source it does, carries much more weight than if it had come from any other living man; and there cannot be much doubt but that the author knew whereof he spoke.

Dr. C. Méhu, Pharmacien to the Charity Hospital, Paris, states, in an article which appeared in *Archives Générales de Médecin*, that he "considers the large transparent cells with granular contents to be leucocytes considerably enlarged, and not in any way characteristic of ovarian fluids, as he has seen them as often in the fluids of ascites, hydroceles, old serous cysts and hematoceles, especially when the collection was of long date." This we see agrees with the experiments of Edwards, who was able to produce these same corpuscles at will, by allowing the pus-containing fluids to stand for a long time at the temperature of the body. Mr. Nunn, another observer, says that "the fact that the fluids drawn from the abdominal cavity have each a separate source of origin, might lead us to conclude that each different fluid would therefore present characteristics peculiar to each." This he states, however, not to be the case; and while he formerly thought that the nature of the fluid would be diagnostic of the disease which gave rise to its production, he now thought that, in the present state of our knowledge, he was not justified in asserting that such was the case.

I. Baker Brown claims in his work on ovarian dropsy, together with his friend Mr. Nunn, to have devoted much time to the study of abdominal fluids, and with Mr. Nunn agrees that a microscopic examination of the fluid may strengthen an opinion, but, alone, it ought not to decide one. Dr. Emmet, in his Principles and Practice of Gynecology, says, that "in some cases the conditions are such that the most expert observer will be left in doubt as to the origin of the fluid." He says, that in two cases has it occurred to him to operate and remove ovarian tumors after experts were unable, after an examination of the fluid, to give the slightest information in regard to the character of the tumor. Dr. Baer states in the January number of the *N. Y. Obstetrical Journal* that he gave some fluid from an ovarian poly-cyst to Dr. Formard to examine. The Dr. stated as a result of his examination of the fluid that he found "a few red blood corpuscles, a few pus corpuscles, and also a few of the so-called ovarian cells, but not enough of the latter to call the fluid an ovarian one." He also says that in his experience, only a large number of these ovarian cells in a fluid would make it safe to pronounce it ovarian. A limited amount of the cells in question is found even in an ascitic fluid. Dr. Baer, in the same paper, states that Dr. Fordyce Barker has informed him that the characteristic ovarian cell had been found in the sac of an extrauterine gestation recently operated upon in New York. Dr. Baer further on in the same paper says: "There is no doubt that the fluid considered as a whole is often of great aid in the diagnosis of obscure cases, but the time does not seem to have yet arrived when a certain element of it can be relied upon as pathognomonic of ovarian disease. Dr. Barnes on one occasion, so he states in his work on diseases of women, opened the abdominal cavity to find only an encysted peritoneal dropsy, after the fluid had been pronounced to be ovarian by men justly considered to be experts. Here we have four cases given, one by Dr. W. F. Atlee, one by Barnes, and two by Emmett, wherein the ex-

amination of the fluid was of little avail diagnostically, as in two of the cases it led the surgeons into the performance of a dangerous operation, to be followed by the extreme mortification and odium that always attend in the wake of such mistakes. On the other hand, we have Thornton, Goodell, Waldeyer, Spiegelberg and Byford, who claim that an examination of the fluid enables them to determine its origin, authorities whose opinions are at least deserving of consideration. Again quoting from the letter of Mallessez above referred to we find the following : "When in the liquid drawn off, we find epithelial cells clearly recognizable (cells calciform, cells with vibrating cilia, or simple cylindrical cells), we must admit that these elements proceed from the walls of the cavity that contains the liquid; in other words, that the cavity possesses epithelial lining. This is the case with ovarian cysts. We can then conclude that such a liquid is not a peritoneal liquid."

Now if the cysts of the broad ligaments are developed, as is affirmed by W. F. Atlee, in the connective tissue between the two peritoneal folds forming this ligament, we should naturally expect to find fluid peculiar to the peritoneum, and if any cells were found, they would be cells peculiar to that membrane and not epithelial, and we would thus be able to make a certain diagnosis between the two cystic formations. This, however, does not seem to be the accepted idea as to the formation of this kind of cyst, as Spencer Wells says they are "lined with a pale, cylindrical, nucleated epithelium corresponding with that found naturally in the tubules." Waldeyer thinks that parts of his germinal epithelium may become displaced and lodge in the connective tissue between the folds of the broad ligament, and thus become the origin of cysts of that ligament. If this should be their true origin, we would naturally expect to find a fluid with all the characteristics of the fluid from an ovarian cyst; in which case the diagnosis would be impossible, so far as an examination of the fluid could be relied on. Garrigues believes

the above to be the true origin of cysts of the broad ligament, and he says the only difference between the two forms of cysts consists in the difference in the size of the epithelial cells lining them, which in the cyst of the broad ligament are smaller than in the ovarian cyst. This difference, however, he does not consider distinctive, as the one may be as large as the other. Farther on in the same article, he says that he considers it impossible to tell by the fluid alone if a tumor is ovarian, or a cyst of the broad ligament.

In the two following cases there can be no doubt as to their being cysts of the broad ligament, as in the first case the ovary was separated from the sac by at least one inch, and was perfectly healthy and of normal size, while the Fallopian tube was flattened out on the posterior surface of the tumor. In the second case the ovary was connected to the surface of the sac by loose connective tissue, and was readily separated from it. It was much congested but otherwise appeared healthy, and was but little enlarged. With these preliminary remarks I shall proceed to the consideration of the cases.

Case No. 1.—Mary McC., aged 38 years, born in Philadelphia, single, seamstress by occupation, was first seen by me in 1872, at which time she gave the following history: Had been a subject of chronic intermittent fever for ten years preceding her seventeenth year. At the age of 14 commenced to menstruate, which event was always preceded by pain, which ceased so soon as the flow commenced. Had almost constant pain over left ovary since first appearance of menses. This was accompanied at times with severe occipital headache. Was occasionally troubled with leucorrhea. Had always been regular. Flow in early life had been excessive, but of late years about normal. First noticed abdominal enlargement when about 15 years of age. This enlargement disappeared spontaneously in about two months. Two years later again began to enlarge, which enlargement gradually increased until February,

1861, when she was tapped by Dr. Charles Pope, and two wooden buckets of clear, limpid fluid drawn off. After this operation her health was poor, and the pain increased. After this first tapping it was two years before it was again necessary to repeat the operation, when again two bucketfuls of a somewhat darker fluid were drawn off. Did not suffer as much after this as after first operation. After this second tapping a period of nine years elapsed before it became necessary to repeat the operation, at which time (August 24, 1872) I saw her first, and took away two buckets of straw colored fluid, of the consistency of peritoneal fluids generally. Between August, 1872, and May, 1878, I myself tapped the patient ten times, drawing off at each operation from one to three bucketfuls of fluid, which at each tapping was darker and more consistent than at the preceding tapping. The fluid drawn off at the last tapping (May 10, 1878) before the operation, presented the following characteristics: was of a dark smoky color, of the consistency of very thick cream, and of a specific gravity of 1021. This, we see, is not the character of fluids of cysts of the broad ligament as given by W. F. Atlee in his work on ovarian tumors. He there answers the question as to how an ovarian cyst can be distinguished from a cyst of the broad ligament by saying "by the character of the fluid," which fluid he describes as "a beautiful, clear, transparent fluid, which did not coagulate either by heat or nitric acid. The fluid was so clear and transparent that the fibrous structure of the boards forming the bottom of the bucket could be readily seen and seemed to be magnified." Now, this description is quite in contrast to the fluid of the above case, so far as we have examined it, as I can assure you that at no time after seeing the case could I see the bottom of the bucket through the fluid.

Now to proceed with the examination of the fluid: Reaction neutral; appearance not altered by addition of acetic acid; did not coagulate spontaneously; coagulated completely by boiling, and also by adding nitric acid. Five

hundred grains of the fluid evaporated to dryness left a residue of twenty-five grains.

Here again we find decided differences, as Dr. Atlee says "the fluid of cysts of the broad ligament contains no albumen, nor is it altered by boiling or the addition of nitric acid, while five hundred grains of the fluid evaporated to dryness leaves little or no residue."

The microscopical examination showed epithelial cells, some in a state of fatty degeneration (Bennet's corpuscles), pus corpuscles, the inflammatory corpuscles, with some fat and cholesterine.

The above fluid certainly presented more characteristics of an ovarian fluid than it did of the fluid of a cyst of the broad ligament—if there is any difference in the fluids of the two forms of cysts, which I do not believe to to be the case; and certainly my experience leads me to that conclusion, and, what is more, it is confirmed by that of many other observers. Garrigues, in his paper already referred to above, in speaking of the coagulability of abdominal fluids, says that "what is said of ovarian fluids applies also to cysts of the broad ligament." This assertion, I think, need not be confined to the coagulability alone. Dr. W. L. Atlee, in his work on ovarian tumors, gives a case of cyst of the broad ligament, in which the fluid presented all the characteristics of an ovarian fluid, corpuscles and all, and adds that he could not account for it.

Case No. 2.—Mrs. F., aged 49, born in Ireland, occupation housewife. About seven months ago felt pain over her left ovary. Shortly after this noticed that the abdomen was gradually enlarging, which it continued to do steadily until March last, when, the abdomen having attained an immense size, she determined to be tapped, and fifteen gallons of a dark olive-green fluid, of the consistency of sorghum, were drawn off, which was not spontaneously coagulable, but became solid upon the addition of nitric acid, as it did also upon the application of heat.

Paralbumen was present in abundance, as the fluid responded readily to the tests for that substance. The microscope showed red blood corpuscles, pus corpuscles, the corpuscles of Gluge, but no Drysdale corpuscles or epithelial cells, no cholesterine, and very little fat was found; indeed, the fluid was poor in cellular elements. While this fluid did not present the microscopical characteristics of ovarian fluid, it certainly did the physical and chemical characteristics.

In summing up the results of our researches, we are led most forcibly to the conclusion that in no way are we enabled to determine the origin of the fluid from its physical, chemical and microscopic characters; and much less surely are we able, after having made out the existence of a cyst, to determine its character by an examination of its contents.

HYSTERECTOMY, IN MALIGNANT DISEASE.

By G. A. Moses, M. D.

[*Read at the Meeting of the St. Louis Obstetrical and Gynecological Society, May, 1882.*]

THE renewed vigor which has of late years been expended in great operations for the conservation of human life has attained for surgical science the point of daring to remove almost any organ, or portion of an organ, which may become diseased, so as to produce lethal results, unless the knife can extirpate the focus of infection.

This being the case, it is no longer a question as to the possibility; that is demonstrated, but we have now to decide when and how to proceed in these operations, which, while the risk is great, the successful result, when attained, is a reward that can by no other method be hoped for. This is my excuse for the discussion I propose to you to-night—the ablation of the uterus for malignant disease.

Whereas clinical observation results in the knowledge that cancer of the cervix is almost invariably found in those who have borne many children (*Scanzoni*, *Emmett*, etc.), I think it will be seen that cancer of the corpus is usually found to result from severe or persistent endometrial inflammation. Thus far the investigations on this point are merely suggestive, but sufficiently so to encourage and exact the closest scrutiny into the history of such cases.

Scanzoni observes, after mentioning the important fact referred to by many that emotions of grief, fretfulness, the cares of life, etc., are among the most important causes of cancer: "In 54 of 108 patients (affected with cancer uteri), some anomaly of menstruation had existed." In eight others the disease declared itself with the symptoms of acute metritis, and in 18 others he met with a primary disease of the uterus, which he could only take for a chronic engorgement, sometimes with and sometimes without ulceration of the os tincæ. (Page 300, Fourth Am. Ed.)

Scanzoni observed also that 28 of 108 were sterile, but makes no distinction between cancers of cervix and corpus.

Veit, of Bonn (*Am. Jour. Obst.*, January, 1881), reporting 43 cases of this disease, 21 of which he personally observed, considers adenoma as the origin; in every case the mucosa was involved, "the musculature having but slight tendency to carcinomatous degeneration."

So far in the course of our investigations we cannot find grounds for deciding whether the malignant growth of localized commencement originates locally, secondarily affecting the constitution, or whether the reverse be true—*i. e.*, the constitutional dyscrasia is in active existence, merely expressing itself first in that structure which presents, by reason of some local lesion, the point of least resistance—*e. g.*, the irritated, frequently excited, lacerated cervix, the chronically inflamed and infiltrated uterine mucosa, or, to take another example, the eczematous nipple of the mamma.

Whichever be the true theory, certain clinical facts are

within our reach, and a proper interpretation of these, as observed in each case, must be our guides for action until that time shall arrive when our knowledge shall be positive.

The growth of carcinomata from any given focus is, for a time, comparatively slow, the increase of cell development being more and more rapid, until, as Rindfleisch graphically says, "it would seem as though nature had concerned herself mainly with an unlimited production of new glandular tubuli, without much caring what became of them." The node becomes a tumor extraordinarily rich in cells, inadequately nourished; and finally, from imperfect nutrition of the crowded contents, destruction ensues, and with necrosis, infection and sepsis. I believe it to be true that it is only in peculiar constitutions that the boundary of simple hypertrophy is passed, and the cancerous growth results; but granting this, the focus of infection appears to exist, at first macroscopically circumscribed; and it is justifiable at present to proceed on the assumption that a focus of irritation being removed, the source of infection would be for an indefinite period annulled.[1]

Until circumferent infiltration (which also may be of a purely inflammatory nature, which time and treatment only can differentiate from malignancy), or lymphatic complication, with signs of cachexia, as expressed in the color of the skin, presence of abnormal secretions or excretions, as, *e. g.*, diarrhœa or gastric failure, we may be permitted to assume that the system is uncontaminated. A sufficient number of recently reported cases are on record to justify this view.

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[1] Since writing this paper I observe that Dr. A. H. Baker (Harvard) contributes to the *Am. Jour. Obst.*, April, 1882, a very carefully prepared clinical report on cancer of the uterus, coming under his observation, and deduces from a large clinical experience the conclusion that the disease is of local origin in the largest number of instances: and even where there is previous constitutional taint, "a localized irritation is the point which is oftentimes first seized upon to manifest the constitutional taint."

Martin, of Berlin, has seen patients living and well nine months after vaginal hysterectomy.

Czerny, of Heidelberg, reports seven cases with three deaths from the operation; of the four successes, one died of recurrence (time not given), one was operated for recurrence in vagina six months after primary operation, two remained free "for a long time."

Cushing, San Francisco (*Am. Jour. Med. Sci.*, April, 1882), reports one case of abdominal hysterectomy fatal, one case of vaginal hysterectomy cured and well four months after operation.

Lane, of California, operated in 1878—the patient dying several months later of what was supposed to be a pelvic abscess bursting into the peritoneal cavity.

Spencer Wells lately reports a case of successful extirpation of the gravid uterus affected with cancer.

Sir W. McCormack, at St. Thomas Hospital, January 3, ult., removed by abdominal section the entire uterus, with ovaries, a large adherent cyst filling pelvis. In ten days the patient was convalescent.—*Lancet*, March 8.

Fenger, of Chicago (*Am. Jour. Med. Sci.*, January, 1882), contributes an elaborate paper reporting a successful case, and giving tables of 45 cases of vaginal hysterectomy, with 31 recoveries, 11 deaths and three uncompleted cases.

Extirpation of other cancerous sites, the mammæ, pylorus and rectum, offer occasional success, particularly the first, so that even Sir James Simpson, who would only consent to hysterectomy in cancers of the body, admits the propriety of operations on the breast, and was an early operator in excision of the cancerous cervix.

Therefore, upon stronger grounds than I formerly found to make even palliative procedures in advanced cases justifiable, do I now unite with those who urge the extirpation of the entire uterus in cases of carcinoma. The operation which in 1822 and again in later years, after having been almost forgotten, demanded the admiration of the world of medicine as a most audacious step in surgery, is being fre-

quently repeated after various methods. We must decide which is the better, and in this decision each case must be a law unto itself. I think we shall be able, however, finally to expunge as inoperable most cases of malignant disease which cannot be completed per vaginam. Corrali, of Florence, has very carefully presented the advantages and disadvantages of both methods.

Are we to forego the operation of amputation of the cervix, scooping and cauterizing, and adopt the more difficult and hazardous one of extirpation? The results of both are still to be compared, and, for the time being, I think we would be wrong to adopt the more radical procedure in cases adapted to the method of Sims. Such cases will be perhaps limited to those where the disease has not yet reached above, or very superficially above, the os internum. (The scoop and cautery will also still be requisite for palliation of hemorrhages and offensive discharges, where any radical operation would be unavailing or impracticable.)

Experience, however, may soon teach us such proficiency in the removal of the entire organ that the dangers incident to it will be reduced to a minimum. Removal of the uterus, even on the cadaver, is an exceedingly difficult matter. The organ is deeply located in the unyielding pelvis, and thus far the operations for its removal by laparotomy present a formidable array of fatality, the most brilliant success being that of Spencer Wells, already alluded to. Even Freund has yielded his judgment to a considerable extent in favor of the vaginal method.

The more extensive wounding of peritoneum, the prolonged exposure of the intestines, the increased shock, seem at present to be insurmountable obstacles to great success by this means; but where the uterus is too large to be readily ante- or retro-verted into the vagina, we must adopt one of the abdominal methods, or some modification of them, or forego the operation.

Dr. Currier (*N. Y. Med. Jour.*, Dec., 1881) has abstracted the different methods very fully, and arrives at the same

conclusion, quoting Schroeder, who says "that after Freund's operation we observed among the patients, really without exception. that they have undergone a terrible ordeal, far-reaching into the entire organism; indeed, not a few die, simply because they do not recover from the collapse, or, in other words, they do not survive the shock. In marked antithesis are those cases in which the uterus is removed through the vagina. The patients present an appearance like that of normal lying-in women, and though they may have lost much blood by the operation, do not appear very different from puerperal patients with whom hemorrhage has been severe." The injury to the pelvic peritoneum does not seem to be disastrous; you may recall a case I reported some time ago, in which a large rent was made by the écraseur in a case of amputation of cervix. Several silver sutures closed the wound through which intestines protruded, and through which I passed my hand and grasped the fundus; within a week the wound was entirely healed, and the patient never had an untoward symptom.

A contracted ostium vaginæ may be overcome by lateral incisions, which give abundance of space, and could not interfere to any serious extent with recovery.

I have not described the technique of the operation; this is abundantly done in text-books and periodicals. In the existing state of the question, I conclude that the value of the surgical treatment of cancer is as follows:

1st. Sims and Schroeder—scooping and supravaginal excision.

2d. Vaginal extirpation—in case the first is unavailable, or has been done without permanent benefit.

3d. Laparo-hysterectomy where the large size of uterus or small size of pelvis forbids the second.

In the first we may hope for a fair number of beneficial results in early cases, and secure freedom from exhausting discharges and sepsis for an indefinite time.

In the second, without incurring unwarrantable hazard,

we have good prospect for retardation of recurrence and some of permanent cure.

In the third, we have the last resort, accompanied by an amount of risk only justified by the certainty of death with great suffering, unless the risk be incurred.

The first should be urged, the second recommended, the third suggested.

Medical Education of the African Race.—A meeting of medical teachers and practitioners was held at the hall of the College of Physicians of Philadelphia May 8th, to confer with Dr. J. B. Lindsley, of Nashville, Tenn., in regard to the interests of a medical college for colored students at Nashville.

It appears from the statements of Dr. Lindsley that the Congregational Baptist and Methodist churches of the North support some twenty-four colleges and other institutions of learning for colored people in the former slave states. There are three medical colleges included in this number, situated at Washington, Raleigh and Nashville. The one at Nashville has buildings that cost $20,000, and is known as the Meharry Medical Department of Central Tennessee College.

Dr. Lindsley desired to secure the interest and endorsement of the representative physicians in the North for the plan of creating a National Board of Trusts, to be chartered by Congress, and to have for its object to promote the medical education of colored people; to aid this institution, which he regards as the most promising one of these now organized, and to render assistance as may be necessary by defraying the expenses of young persons of African descent who display superior intellectual capacity. It is designed also to give special attention to the preparation of colored physicians as missionaries and explorers in Africa. The general sentiment of the meeting seemed to favor the measure as being calculated to secure the adequate support of one institution instead of frittering away the contributions of philanthropists in the partial maintenance of several weak medical colleges. Drs. H. Hartshorne, Richardson and Harlow were appointed a committee to prepare a suitable endorsement of the proposed National Board of Trusts.—*Med. and Surg. Rep.*, June 10, 1882.

CONGENITAL CYSTS OF THE THYROID GLAND.

By Frank J. Lutz, M. D., St. Louis, Mo.

[*Read before the Missouri State Medical Association.*]

UNTIL quite recently, very opposite opinions were held about the occurrence and frequency of congenital bronchocele; but it is safe to assert that congenital goitre occurs much more often than is usually supposed, not only in the lower animals, such as sheep and goats, but also in man.

I regret very much that I have not at hand the statistics of a number of large hospitals for children, in order to present some tangible statistical facts. The only figures which I can quote, give, however, I dare say the average proportion. Demme, of Berne, Switzerland, says that of 462 cases of struma which were observed in the children's hospital, 53 were congenital.

Many cases of congenital bronchocele so called are not neoplasms in the true sense of the term, but only an enlargement of the thyroid gland, due to chronic hyperemic turgescence. In the normal development of the child there occurs sometimes, especially during the period of dentition and during puberty, a temporary congestion of the thyroid gland, and should this condition of hyperemia continue for any length of time, there is established a chronic swelling of the gland. How very readily disturbances of the circulatory and respiratory apparatus may bring about an engorgement of the veins and capillaries of the thyroid gland, and how this in turn will result in the dilatation of these vessels, is well understood. This accounts for the enlarged thyroid which is observed in pertussis, chronic catarrhal pneumonia, valvular diseases of the heart and various febrile disorders, in which latter cases the enlarged thyroid is said to yield to antipyretic treatment, just as the spleen does. Sometimes disturbances in the nerve supply

of the blood vessels of the thyroid — a paralysis of the sympathetic—causes enlargement. Most cases of congenital bronchocele are due to this cause, viz: chronic hyperemia. Bronchoceles of this kind disappear rapidly and spontaneously.

There occur, however, congenital goitres which consist of a true hyperplasia of the tissues of the thyroid. Even in the fetus expelled before term, such hyperplastic enlargements of the thyroid have been observed, and it would appear as though the neoplasm was considerably larger in the fetus than in the child at full term. Thus Berand and Danyau (*Bulletin de la Societé de Chirurgie*, 1861, p. 108) report the case of a five and a half months fetus, which was born alive with a vascular, soft, follicular struma extending from one parotid gland to its opposite fellow. Virchow (*Die Krankhaften Geschwuelste*, Vol. III., p. 51) observed a case, also in a five and a half months fetus, in which the struma was covered with veins, and weighed 16 grammes. Hecker reports (asphyxia in congenital struma, *Monatschrift fuer Geburtskunde*, 1868, XXXI., 2 and 3, p. 119) the case of a child which at birth weighed seven pounds, and which died immediately afterwards of asphyxia. It had a goitre weighing 41.6 grammes; the normal weight of the thyroid gland being between 2 and 7 grammes. Demme (*Gerhard Handbuch der Kinderkrankheiten*, Bd. III., 2nd Haelfte, p. 390) mentions a case in which he observed a neoplasm of the thyroid which weighed 102 grammes. The child died 36 hours after birth.

Nor is the literature on this subject devoid of instances in which the enlargement of the thyroid was so great as seriously to interfere with the expulsion of the child. (Hubbauer *Wuertembergsche Zeitschrift fuer Chirurgie und Geburtskunde*, 1858, p. 1, and *Houel Soc. Anat.* Oct. 3, 1873.)

The most common form of congenital bronchocele is that in which there exists a simple hyperplasia of the thyroid gland. The various elements composing it have been uniformly enlarged. *Congenital cysts* of the thyroid, it would

appear, occur least frequently of all the congenital neoplasms of this gland, and the recorded cases are so few and scattered throughout the periodicals, that unless one is so fortunate as to have access to a very complete library, he must content himself with a very imperfect enumeration.

Bednar (*Die Krankheiten Neugebornen und Saenglinge*, vol. iii. p. 80) narrates a case in which there existed congenitally a cyst as large as a walnut in the right lobe of the thyroid. Its interior was divided into several compartments, which contained a hard, yellowish mass (colloid, multilocular). It neither increased nor diminished in size.

V. Ammon (*Die Angebornen Chirurg. Krankheiten des Menschen*, p. 57) details a case which is reported to him by Adelmann, who observed it in Dieffenbach's clinic. The child was fourteen days old when seen by Adelmann. The goitre was so large that several physicians diagnosticated a fetus in fetu. When the child cried, the goitre became of a dark red color, and the veins of the neck became immensely swollen. The child lived for ten months, and at the post-mortem examination serous cysts and cartilaginous formations were found.

Hubbauer's case, which was mentioned above as constituting an impediment during delivery, occurred in a boy, who was the twelfth child of a woman, who, in none of her previous confinements had required assistance. The boy was otherwise well formed, but there grew from the left lobe of the thyroid gland a soft fluctuating tumor, much larger than the child's head. Its base began on the right side of the chin, and extended to the left ear, and downward over the left upper half of the neck. Some of the cysts contained a limpid, yellowish fluid, and between them there was a soft pulpy mass.

Gurlt (*Ueber die Cystengeschwuelste des Halser, p. 72*), after speaking of the great rarity of congenital cystic tumors of the thyroid, expresses the opinion that there is room for doubt as to the nature of the two cases last mentioned.

Demme (*op. cit. p. 391*) illustrates the case of a twin boy with a congenital cystic struma. The twin sister of this boy was also born with a congenital enlargement of the entire thyroid, hyperemic in its nature. Both the father and the mother of these children have bronchoceles; the former's neoplasm being of the soft follicular variety, whereas the other has a cystic tumor.

The same author also gives the following statistics: Of 53 cases of congenital bronchocele, 27 were simply hyperplastic in their nature, 14 were follicular, and 9 were cystic.

These changes, which are observed in cystic bronchoceles of adults, take place also in congenital cysts of the thyroid.

Boucher (*Kystes Congenit. du Cou. Thése de Paris*, 1868, p. 108) saw blood effused into a congenital cyst of the thyroid in a seven months fetus. Besides this blood, which had undergone decomposition, he found crystals of cholesterine, and in the walls of the cyst cartilaginous changes had taken place. This latter condition of affairs resembles very closely that observed by Adelmann, in the case cited above.

It is one of the peculiarities of congenital cystic bronchoceles that their walls are very vascular, which explains the frequency with which the cyst is filled with blood.

Symptoms.

The symptoms of large congenital bronchoceles, whether cystic or not, will depend to some extent upon the site of the tumor. Usually there is laryngeal and tracheal stenosis followed by asphyxia resulting from the compression; and therefore children affected with congenital struma are frequently born apparently dead. When a fetus with a bronchocele is born dead, it dies as a rule of asphyxia due to compression of the larynx and trachea during its passage through the mother. In a like manner death is caused in those cases in which bronchoceles develop immediately after birth, by reason of a rapid hyperemia of the entire thyroid.

Alarming disturbances of respiration may also be caused by congenital as well as acquired bronchoceles. The anatomical configuration of the neck in infants; its shortness and the thick cushion of fat which covers it, make these symptoms occur quite frequently. Both inspiration and expiration are accompanied by a rough blowing or rattling sound which is audible at quite a distance.

During these attacks of respirafory difficulty, respiration becomes gradually more rapid, superficial and short, and ceases entirely (Cheyne-Stoke's phenomenon). After a short interval respiration again begins: the child takes a deep, slow respiration, accompanied by a snoring noise. This same process may be repeated a number of times, and during it the lips and cheeks are blue; the veins of the face and neck become congested; the eye-balls seem to protrude from their sockets and the mouth is filled with phlegm, whilst the circumference of the neck, especially in the region of the thyroid, is considerably increased.

These symptoms are due in part to a temporary compression of the respiratory tract by the bronchocele, but they may also be attributed to some extent to pressure of the tumor on the vagus nerve.

Death may be caused during such an attack by asphyxia due to the complete stenosis of the trachea or larynx, or else it may be due to gradual exhaustion accompanied by cerebral and meningeal effusion.

Congenital bronchoceles may give rise to atelectatic patches in the lungs, or to chronic pulmonary hyperemia, broncho-pneumonia, acute edema of the lungs, etc., and if the pressure is long continued chronic edema or hypertrophy of the brain may result.

Etiology.

Those factors which predispose to the development of bronchocele must also be considered as predisposing elements in the causation of congenital bronchocele. Thus the endemic character of this affection need not be men-

tioned, nor the climatical and geological conditions which favor its genesis; but the anatomical peculiarities of the fetal and infantile thyroid gland, its great size and vascularity, and the unusually large size of its blood vessels, may be considered as predisposing causes. Besides this, the heredity of bronchocele is established beyond controversy: it has been observed in sheep and horses by Barton and Lebert, and in the human species by Müller, Friedrich and Demme. Nor can it be doubted that defective nutrition of the mother, and through her of the fetus, may be considered a predisposing cause, as well as the very irregular development of the thyroid vessels upon which Virchow lays so much stress. Besides this, any peculiar position which the child may assume during parturition may become an etiological factor in the production of congenital goitre; and some authors (Bednar, Hecker and others) have called attention to the frequency with which this deformity occurs in children who were born in the face presentation, and have offered in explanation the fact that the long continued, constant pressure of the muscles of the neck causes stasis of the blood in the thyroid, and thereby dilatation of its vessels. When we remember, however, that goitres are observed in the fetus at five-and-a-half months, it stands to reason that other, more important but yet unknown factors must contribute toward the production of these congenital neoplasms.

Treatment.

For the present, only congenital bronchoceles of a cystic nature concern us. They may require treatment on account of the asphyxia, either brought on or increased during the parturient effort. If the child is seen immediately after birth, it may be within the power of the physician to rescue it from death, by inducing regular and complete expansion of the lungs, by removing the cause which interfered with free respiration—and in extreme cases we may resort to tracheotomy, or introduce into the trachea, through the mouth, an elastic catheter.

The treatment subsequently consists in an attempt to produce absorption of the cyst by the local and internal use of iodine in some of its combinations, or else the cyst may be tapped, and then injected with tinctura iodinii; or, finally, the cyst may be incised, and its walls attached to the skin, as suggested by Beck. This latter procedure is, however, a very dangerous one, both on accouut of the immediate hemorrhage which may follow the incision, as also because of the secondary bleeding which may come from the very friable walls of the cyst. Nor should the fact be lost sight of that the surrounding cellular tissue may become the site of a suppurative inflammation, and that the incision is very much inclined to close up, and thus form a favorable sac for the retention and absorption of the inflammatory products.

CONGENITAL MULTILOCULAR CYSTIC DEGENERATION OF THE THYROID GLAND.

By Dr. A. W. McAlester, Columbia.

(*Read Before the Missouri State Medical Association.*)

In looking over the literature of congenital tumors of this gland, I find but little in the ordinary text-books upon this subject, outside of a few isolated cases published in our journals from time to time. I know of but two sources from which much information upon this subject may be gleaned, to-wit: Holmes and Gurlt. The last is not translated, but my friend, Dr. F. J. Lutz, of St. Louis, Mo., who was kind enough to procure a copy of Gurlt, has made a supplementary report on this subject.

Before giving the details of the case, allow me to rehearse the anatomical structure of the gland and the pathological characters of the growth.

We distinguish two substances: 1st. The glandular fol-

licle, the analogue of secerning glandular substances. 2nd. A frame work of connective tissue which incloses the follicles and unites them in smaller groups to grains, in larger, to lobules and lobes.

Each follicle contains a clear fluid, rich in albumen. The connective tissue is richly supplied with blood vessels. Hence the easy transition of this gland into many cysts—a follicular wall breaking, and the thick albumen becoming more and more fluid, till pressure ruptures another, and so on until many sacs are formed.

History of the case. By the courtesy of Dr. Trimble, I was called in consultation to see the child of Mrs. B——. When first seen by me, the child, a girl, was ten days old. I found a tumor, with irregular outlines, extending from the angle of the right lower jaw to the median line of neck seven inches, thence towards opposite side two inches, from center of right clavicle to the middle of lower jaw five and a half inches; lobulated, translucent, and as I thought fluctuant with somewhat of a solid base near the median line and lower part of tumor.

The history, as given by Dr. Trimble, is as follows:

"Called to see Mrs. B——, May 25th, 1881; found her in labor nothing peculiar developing till the child's head passed the inferior strait, when it was delayed. Upon examination I found an enlargement upon the side of the face, as I thought; I then grasped the head with my hands and made several lateral movements, when the whole of the child was expelled, followed by great hemorrhage. This woman was the mother of two children. The oldest one died at eleven months from measles, complicated with capillary bronchitis. The mother and father had a healthy look, and stated that they always enjoyed good health.

Grandfather died at the age of 64 years, of tuberculosis. Grandmother, on mother's side, living, and presents a scrofulous appearance.

The tumor gradually increased in size up to the date of its death, as the post-mortem measurements will show.

The child grew, and did well for three months, after which time it became emaciated, the tumor still growing, thus showing that the child was not capable of standing this division of nutrition, to-wit, to nourish the growth and the body at the same time. The emaciation continued, and the tumor increased till the day of the death of the child, October 21, 1881.

Pneumonia was the immediate cause of its death. Dr. Trimble attended the child in its last illness.

Post-mortem held at the Valley Springs Cemetery, Boone Co., Mo., October 22, 1881. Dimensions of tumor, long diameter, eleven inches; short or transverse diameter from middle of clavicle to middle of inferior maxillary bone, six and a half inches.

Incision was made in long diameter, and skin dissected back.

Relations of tumor as follows: Covered in front and sides by cervical fascia, left lobe was covered by sterno-hyoid and sterno-thyroid muscles, right lobe was beneath the sterno-cleido-mastoid muscle; the external jugular vein crossed the tumor on its external surface near the junction of the posterior and middle parts, almost normal in its course.

The common carotid artery, deep jugular vein, and pneumogastric nerve crossed the tumor in front, being pushed somewhat to right, and external to their normal positions.

Branches of the cervical plexus were distinctly seen on the anterior and external surface of tumor.

To remove the tumor the following structures were cut and turned out of the way, to-wit, sterno-hyoid, sterno-thyroid, sterno-cleido-mastoid and omo-hyoid muscles, common carotid artery, external and internal jugular veins and pneumogastric nerve. The tumor was then found to be attached to the hyoid bone, thyroid cartilage, and three adjoining rings of trachea, thus making an attachment of two inches.

The lower border of the inferior maxillary bone on right

side was partially absorbed from angle to symphysis. The alveolar process remained normal.

The parotid gland and other structures in contact with tumor, seemed not to be altered either in position or size.

Upon examination, the tumor was found to be partly cystic and partly solid. Weight of tumor entire, two pounds. Upon puncturing the cysts, and thoroughly evacuating them, the tumor was then found to weigh only one pound.

The fluid evacuated was perfectly transparent, without odor, and upon analysis was found composed largely of albumen. There were many cysts, and the walls of the larger ones were transparent.

Present, and taking part in this post-mortem, were Drs. W. Moss, James Gurdon, W. H. Douglass, D. H. Young, P. I. Mitchell, and two medical students, R. V. Bonham and W. P. Wilcox.

Dr. Jas. Gurdon has tabulated a few cases for me to which I wish to refer to.

Disease.	Symptoms.	Treatment.	Result.	Operator.	When Reported.
Congenital cyst of neck.	Size of walnut at birth. Lobulated Fluctuant.	Was tapped several times without arresting its growth. Electrolysis tried three (3) times at intervals of 4 days. Tumor increasing. Finally extirpated at 5 months of age. Capillary hemorrhage great. Time occupied in operating, 1 hour and 5 minutes.	Successful.	Jas. Hardie.	London Lancet, reprint, Feb. 1873, p. 85.
Hydrocele of the neck.	Translucent fluctuant.	Tapped at 2 years old, Refilled in 7 months. Five drainage tubes used. Tumor increasing. Was then incised. Again transfixed. Suppuration followed.	Cured.	Sampson Gamgee.	London Lancet, direct. Feb. 27, 1875.
The early history of this case not given.					
Serous cyst of the neck.	Not given.	Removed and found complicated with a nevus.	Cured.	Sir Wm. Laurence.	By Sir Jos. Paget.
Hydrocele of the neck.	Not given.	Tapped and injected with iodine.	Cured.	Prescot Hewitt.	Holmes' Surgery, p. 978.
Ditto.	Ditto.	Spontaneous opening.	Ditto.	Miruhes.	Ditto.

Also another by Mr. B. Phillips, *Med. Chir. Tran.*, vol. xxv., p. 299.

The deductions from these cases show that complete excision is the only reliable treatment in such cases.

To determine the propriety of operating in a given case, requires you to establish not only the *character* of the tumor, but also its situation and attachments.

As, for instance, a hydrocele of the neck, destitute of solid matter, would be far less dangerous than the above cited case. You might tap and inject a hydrocele with success, but to break down a pound of solid substance by suppuration is a very different matter.

Can excision be safely performed?

Very young children suffer from *shock* greatly, and one of the great—perhaps the greatest—cause of shock in children is the loss of blood. In this case the loss of blood must, from the anatomical arrangement of the parts, be very great.

Should the child survive the shock, there must be strong probability of direct union, as the formative powers of their tissues are very great. Hence the great advantage of excision, though more hazardous at the time, will be far less dangerous in the outcome.

It is plain that the child's condition can not be made worse. Now the question is whether there is enough prospect of *doing good* to induce a surgeon to risk the reputation of himself and his art by attempting anything.

Most of these tabulated cases, and also those reported by Holmes, are multilocular cystic degenerations of the thyroid gland. Excision, in these cases, is very different from removing the thyroid gland in which hypertrophy and hyperplasia already existed, and one too so freely supplied with arteries (four in number). And if hemorrhage has anything to do with shock, how great, then, will the shock be when these four arteries are severed, with their freely communicating branches.

I am well aware of the fact that children sometimes stand operations remarkably well.

I might refer to the case of Dr. Wm. Gunn (*Chicago Med.*

Journal of Dec., 1860), where, in a child fifteen months old, he amputated, with success, its limb with a congested tumor extending from knee to ankle and measuring 20½ inches in circumference.

See cases reported by Dr. F. Hamilton (*American Journal of Medical Sciences*, Jan., 1857, p. 283), in which he reports some cases of congenital multilocular cysts, whose walls seemed to be vascular. He excised one with success. The other he incised and the child died on the fourth day. His conclusion was for complete excision.

He also believes such tumors to be associated with highly vascular walls. This was not the case in the one I have just reported to you.

Holmes gives his opinion in favor of complete excision.

To conclude, would a surgeon be justified in operating on the case reported?

Tri-State Medical Society.—The eighth annual session of this wide-awake medical society is to be held at Terre Haute, Ind., Sept. 26, 27, 28. Arrangements have been made by the committee for reduced fares on the railroads centering in Terre Haute, and for reduced rates at the hotels. The programme promises fifty-one papers, many of which are on subjects of great interest, and by men whose names are a guarantee of faithful, careful work in their preparation. This society has adopted the practice of giving the whole time to working sessions, and makes no provision for junketing, banquets, or other social enjoyments. It is eminently a working society, and we think the prospects are excellent for a profitable session this year. Volunteer papers are solicited, and arrangements will be made for their presentation. Those desiring to avail themselves of special rates by rail, and at the hotels, should apply for further particulars to Dr. J. E. Link, chairman of the Committee of Arrangements.

CASES FROM PRACTICE.

HYSTERO-EPILEPSY.

BY FRANK R. FRY, M. D., ST. LOUIS.

Tuesday, Sept. 27th, 1881, 12 P. M. Was called to see Mrs. D——, German, aged 22 years, nine months pregnant, expecting her confinement daily, in regard to which she had previously consulted me. She was having convulsions of the following description: there were first clonic spasms of the muscles of the face and extremities, followed by a general tonic spasm, in which the patient went into a complete opisthotonos; at the beginning of each convulsion the face was flushed, there was slight frothing at the mouth, the pupils were moderately dilated, not responding to the light of a candle, the only light in the room. The convulsions followed one another in rapid succession for about an hour and a half, during which time there was no evidence of consciousness, and but little of sensation of any kind. Pricking the skin, irritating the conjunctiva and introducing the hypodermic needle had no apparent effects. The temperature was normal.

Gave her ¼-grain morphia sulph., hypodermically, which was repeated in a half hour. On the approach of a convulsion allowed her to inhale amyl nitrite several times. It seemed to have no effect.

At the end of about an hour and a half she was conscious. As consciousness returned, and the spasm gradually subsided, with occasional involuntary jerking of the extremities and twitching of the fingers and muscles of the face, she showed hysterical symptoms — throwing herself into uncomfortable positions, rolling her eyes, sticking out her tongue, snapping at the bed covers and catching them in her teeth. But she quite rapidly became cognizant of her surroundings and what had happened (for she had had similar attacks previously, as the history will show.) She complained of pain in her head, stomach and abdomen, and felt tired and sore. She had been

feeling quite well all the day, but had been going about all the time up till late at night, when she fell in the fit. No symptoms of an approaching labor.

Wednesday, 28th, 9 A. M. Had not rested well. During the latter part of the night she had had several convulsions. Bowels had moved and she had passed a large quantity of urine. Temperature normal; some twitching and jerking of muscles of face and extremities. Gave her ¼-grain morphia sulph., hypodermically; ordered 30 grains potass. brom. every three hours. No signs of labor. 10 P. M. No signs of labor.

Thursday, 29th, 9 A. M. She had several short convulsions during the night; had not rested much. Temperature normal. No signs of labor.

8 P. M. Was sent for, and found her having convulsions of the description given above. Gave her 40 grains potass. brom.; remained with her two hours; giving her 40 grains more of the bromide. Left her better, ordering 40 grains more of the bromide to be given within an hour and a half, making 120 grains within three and a half hours. Shortly after the last dose labor pains rapidly came on, and within an hour and a half she was delivered of a small but healthy child, with the assistance of a midwife, I not being able to get there in time.

Friday, 30th, 9 A. M. Found her bright and cheerful; good appetite, no pain, no soreness; had slept well and almost constantly.

Saturday, October 1st, 9 A. M. Found her in same good condition. She had been comfortable all the time.

Sunday, 2d, 9 A. M. Found her still perfectly comfortable. Lochia not flowing very freely. At 2 P. M. was called, and found patient having convulsions of description given above. Lochia had stopped. Could not tell whether there was any pain or tenderness about the womb. Ordered hot poultice to lower part of abdomen and vulva, and vaginal injections of warm water, 5 grains of quinia sulph. and 30 grains of potass. brom. every three hours.

Monday, 3d, 9 A. M. Found the patient feeling much more comfortable. Lochia had started again. The bowels had moved. There was no tenderness about the womb. On evening of same day she was feeling perfectly comfortable again, and everything was going all right.

On the 5th and on the 8th the lochia stopped again, and each time she had a series of convulsions, which ceased when it was re-established.

I obtained the following previous history: In the eighth week of her first pregnancy she was frightened by her brother, who had secreted himself behind a door for the purpose of startling her. She ran out into the street and fell in a fit, which was immediately followed by a miscarriage, accompanied with much hemorrhage. She made a good recovery from this, and was in excellent health until about nine months after this time, when she was in the fourth month of her second pregnancy. She one day suddenly fell over in a fit, being engaged at the time in a quiet conversation with her father. She knew of no cause for it. She was delivered at the full term of a healthy child, no more fits or other unusual events having occurred. Nine months after, she became pregnant the third time. During the third month of this pregnancy she was taken with convulsions, followed with *flooding*, or the passage of a considerable amount of blood. Between this and the seventh month, at which time this child was born, the same phenomena recurred three or four times, keeping her sick and on her back much of the time.

She was delivered on the night of September 29th, 1881, of the third child (not counting the miscarriage). In the third month of this pregnancy she again had convulsions and flooding, so bad at one time that her physicians contemplated removing the child. When in the seventh month she again flooded slightly, and consulted me about it at the time, but she had no convulsions, and got along well and carried the child to term, at which time the above history begins.

She never had had a fit of any kind previous to the first instance here mentioned, but had always been strong, healthy and active, and had had no unusual trouble with menstruation at any time.

I have reported the above because the history would seem to show that the convulsions had some relation to the condition or conditions of the uterus at the time that they occurred, and probably that they were caused by those conditions, whatever they were.

701 Washington Ave.

PARTIAL PSYCHO-MOTOR CONGENITAL PARALYSIS.—RECOVERY UNDER GALVANIC AND INTERNAL TREATMENT.

By C. H. Hughes, M. D., St. Louis.

Stella McK., living in Kirkwood, Mo., later in Springfield, one year old and not yet weaned from the mother's breast when she first came under treatment, Sept. 10th, 1881. At that time her parents consulted a distinguished surgeon of this city (Dr. Hodgen), who, finding no spinal deformity or peripheral or other lesion remediable by surgery, kindly referred the parents to me.

The little patient could not then hold its head erect, though it could feebly move it to and fro and from side to side. She also had prehensile power under peripheral stimulation, holding to the finger when placed in its hand and moved about and gently pulled, though she would drop a rattle. She could not stand or sit up, except when supported firmly about the waist by our hands. She could move the upper and lower limbs in various directions when recumbent and when partially supported, but could not accurately place them where she evidently wished to put them. There were none of the jerking inco-ordinate movements of chorea, or the absolutely limp conditions of essential paralysis in the extremities.

The muscles were fairly well developed for an infant of that age, and the reflex organic functions of deglutition, micturition and defecation were normally performed. There was no anesthesia and no contractions. The child had never any convulsive trouble. The child's intelligence was good, and she is now, ten months later, a very bright child, speaking some monosyllables and comprehending well the names of familiar objects about her. She could early laugh and cry audibly, and by sounds and incomplete gestures could indicate wants, pleasure, likes and dislikes, and was not and is not perceptibly deficient in her mental faculties proper.

The transformation from marked helplessness to motor helpfulness, after six months of persevering treatment, is now so complete that the grasp of the child is firm in both hands; she takes food into a spoon and carries it to her mouth; stands up by a chair; jumps up and down, or walks with definitely placed

steps when her outstretched hands are held by some one, or supported by a chair or "go-cart." Her fingers all close simultaneously under direction of the will, where, formerly, in-co-ordination existed.

In short, the child is practically recovered, having reached a point where the natural will impulses and the normal developmental evolution may be safely relied upon to strengthen all of the voluntary movements. The child's deciduous upper and lower incisors, and cuspidati are through the gums, and since this much of dentition has been completed she has greatly increased in flesh.

No detail of treatment is necessary, except to say that a mild, constant current was passed twice daily for about three months, daily subsequently for about two weeks each alternate month, from over the Rolandic fissure of each side to the back of the neck opposite, immediately under the occiput, and from thence to each hand, the hands being moved about while the current was being applied, thence down the back and to each foot. To this was added malt and peptones, beefessences and such food in abundance, as the child craved, and a regular internal prescription of one drop of Fowler's solution of arsenic, eight minims of the compound syrup of the hypophosphites of lime, iron and soda, to which was added an infinitesimal quantity of strychnia, and about a grain of bromide of calcium three times a day. Quinine in minute doses was given also for awhile, and chloral hydrate and bromide of sodium, in the beginning to tranquilize the child and make it sleep, for it was then habitually restless, fretful and sleepless. At critical times during the teething process, when convulsions were imminent, liberal doses of chloral and bromides, and frequent warm bathings and some opium, were employed.

The father of this child is not robust, having a tendency to phthisis. The mother is in vigorous health, and has since borne a robust child, perfect in power of mental and physical movement.

The Medical Chronicle, from Baltimore, is the last candidate for success in the field of medical journalism. We wish it may have all the success it deserves.

EDITORIAL.

CAFFEIN IN HEART DISEASE.

The use of caffein has not become general in this country as yet. In England it has attracted some attention as a diuretic, and it has been used to some extent as a nerve tonic, Dr. Shapter having specially commended it in the treatment of nervous diseases dependent upon the abuse of alcohol.

Professor Lépine, in a recent paper in the *Lyon Medical*, urges the use of caffein in the treatment of heart diseases, in the same class of cases in which digitalis is usually found valuable. He thinks that caffein possesses distinct advantages over digitalis, which he considers in detail.

He has been using caffein in these cases for four years and has administered it to more than sixty patients. He maintains that the dose, to be effective in action upon the heart, must be considerably larger than that which has ever been generally administered heretofore. He gives from 60 centigrams (9.25 grains) to 1 gm. 50 (23 grains), and sometimes 2 grams (30 grains), or even 2 gms. 50 (30 grains). Such doses as are directed in the books he finds utterly inefficacious.

He found that this drug is equally effective with digitalis in retarding the rate of cardiac action and in increasing its force. In comparing the relative merits of the two drugs, he asserts that caffein acts much more rapidly than digitalis, which fact, though it may be of little importance in a chronic disease, may be of real importance where asystolia occurs as an acute condition. Secondly, he says that caffein is much better tolerated than digitalis, and if taken in divided doses during the day very seldom causes any symptoms of intolerance at all, such

as are not at all infrequent in the administration of digitalis. This he attributes to the facility with which caffein is eliminated. Of course, where the kidneys fail to eliminate the drug it would be retained in the system, and would occasion disturbance, but he claims that the danger from this source is far less than that from the use of digitalis. Finally, he has found that by the majority of patients the caffein is preferred to the digitalis. He has repeatedly found this to be so in cases where he has used both drugs alternately upon the same patient.

On the other hand, there is a certain proportion of patients (he has found this true in about one out of twenty) in whom caffein produces insomnia and other nervous symptoms. While these cases are rare they do occur, and this condition is an absolute contra-indication to the use of this drug.

The only other inconvenience in the use of caffein is the expense of the drug, which places it beyond the reach of patients in straitened circumstances.

M. Lépine does not claim that caffein will cure all cases of asystolia, but does assert that it has all the merits of digitalis and some advantages over that drug. He promises to give reports more in detail of his own observations and of cases that have been reported to him by some of his colleagues.

THE PHYSIOLOGICAL AND THERAPEUTICAL ACTION OF THE SULPHATE OF QUININE.

It is to the study of the therapeutical action of drugs that we need to devote our most diligent study and our most earnest endeavors, and preparatory to and associated with this is the study of their physiological action.

The essay of Prof. O. F. Manson, read before the Virginia State Medical Association last year, and now, somewhat enlarged, published in book form by J. B. Lippincott & Co., is a

valuable contribution to this department of medical study. We shall not attempt to give a digest of the whole book, but shall call the attention of our readers to some points as they have attracted our attention in reading it.

Prof. Manson shows that the views of different eminent practitioners with reference to mode of action of quinine are directly opposed to one another, and are in many respects irreconcilable; some, as Giacomini, regarding it as *hyposthenisant*, or depressing the vital powers, while others, as Prof. Wood, consider it *hypersthenisant*, excitant or stimulant.

The conclusion which our author reaches in regard to the *modus operandi* of quinine is, that it "potently contributes to the removal of disease, by rendering the nervous system insensible to the action of the morbific causes of those maladies in which its employment has been proven by experience to be efficacious." "It *impairs the impressibility itself*, and fatal things pass harmless by the paralyzed center. The center does not and cannot reflect an impression which it has been rendered incapable of receiving." He coins the word *paralysant* to characterize the action of the drug; and gives as a rule to guide in its administration that the end to be kept in view is, "to render the receptive centers securely insentient to its morbific assailants, and to hold them in subjection until they have lost, by elimination or from exhaustion, their power to impress."

Whether further study shall demonstrate that the theory is absolutely correct or not, for the present it explains the phenomena certainly as well as any theory that has been proposed. If it be, as Dr. Manson asserts, that malarial affections, including the neuralgiæ and all the diseases in which quinine has been found to be an efficient remedy, are caused by a poison circulating in the blood and expending its force directly upon certain nervous centers, certainly his explanation of the method by which quinine cures these diseases is a plausible one.

One practical point in reference to the administration of qui-

nine is worthy of note. In discussing the action of quinine in remittent fever, the question comes up as to the most advantageous time for administering the drug. He asserts as the result of forty years' observation of malarial diseases, intermittent and remittent, that in the vast majority of cases the exacerbation takes place in the afternoon or in the evening, and that the cold stage very rarely occurs between nine P. M. and sunrise; and that however elevated or continuous the fever may be, there is almost invariably some abatement in the latter hours of the night. This, then, is the time at which he would administer the quinine. Thus the action of the quinine promotes and hastens the natural declension of the fever, and at the same time the stomach is less irritable, and there is less tendency to reject the remedy than when it is given in the height of the fever.

With reference to the value of quinine in typhoid fever when uncomplicated with any malarial influence, he regards the matter still unsettled. He considers the question of its value in several other diseases, commending it most highly in the treatment of erysipelas, both idiopathic and traumatic. He also regards it as of high value in the treatment of croup and cholera infantum.

BOOK REVIEWS AND NOTICES.

1. Eczema and its Management. A Practical Treatise based on the Study of two thousand five hundred Cases of the Disease. By L. Duncan Bulkley, M. D., Attending Physician for Skin and Venereal Diseases at the New York Hospital; editor of the Archives of Dermatology, etc., etc. New York: *G. P. Putnam's Sons.* 1871.

2. Manual of Diseases of the Skin. With an Analysis of 8,000 Consecutive Cases and a Formulary. By L. Duncan Bulkley, M. D. *G. P. Putnam's Sons.* 1882.

1. Dr. Bulkley has done a valuable service in the preparation of this volume, for in its pages we are freely presented with the best experiences of one who has given long and earn-

est study to the subject. The great merit of the book lies in its downright, practical tone; every page gives abundant evidence that the author has borne this constantly in mind. The chapters devoted to diagnosis and treatment are more thorough and satisfactory than in any other works within our knowledge.

There are some points, such as the author's theories upon the emotional nature of eczema, and also some questions as to constitutional treatment, from which we are obliged to dissent; but these are matters of opinion, and however one may believe in regard to this or that theoretical point, the main thing to be considered is, how to recognize, and how to cure. We heartily commend Dr. Bulkley's treatise to the attention of those who wish to obtain a thorough knowledge of eczema.

2. Dr. Bulkley's Manual of Skin Diseases will be found of particular value to students attending dermatological lectures and clinics, and will also prove very convenient as a book of ready and reliable reference to the general practitioner. It is an infinitely better book than certain of the European epitomes that have been from time to time re-published in this country.

W. A. H.

Atlas of Gynecology and Obstetrics. Edited by Dr. A. Martin, Professor of Gynecology at the University of Berlin; containing 475 pages, and 37 colored illustrations from the original designs of Beigel, Virchow, Hyrtl, etc., etc. Supplemented by numerous illustrations from J. Maygrier's Nouvelles Demonstrations d'Accouchements. *A. E. Wilde & Co.*, Publishers, Cincinnati, Ohio.

The completed set of A. E. Wilde & Co.'s reproduction of the Atlas of Gynecology and Obstetrics, edited by Martin, of Berlin, amplified by the addition of some of Maygrier's drawings, is now presented to subscribers, who, we do not doubt, will find them of use in assisting their anatomical recollections. The amount of illustration is great in proportion to the cost, and as a consequence much of the work is not of the best. The work is sold only by subscription.

Lectures on Electricity (Dynamic and Franklinic) in its relations to Medicine and Surgery. By A. D. Rockwell, A. M., M. D., etc. *New York: William Wood & Co.* 1881. 8vo., pp. 122; cloth.

These lectures of Dr. Rockwell are intended to give helpful practical instruction in regard to the methods of using elec-

tricity in the treatment of various diseases. In this second edition he has introduced a chapter upon the medical use of static electricity; and also a description of the electric accumulator, which is a most important addition to the list of electrical appliances. The volume will be of service to many who may not choose to buy the large volume.

A Treatise on the Physiological and Therapeutic Action of the Sulphate of Quinine. By Otis Frederick Manson, M. D., etc. *Philadelphia: J. B. Lippincott & Co.* 1882. 12mo., pp. 164; cloth, $1.00.

For notice of this book see editorial p. 243. We commend it to the careful perusal of all.

BOOKS AND PAMPHLETS RECEIVED.

Annual Announcement of Trinity Medical School, established 1850. Incorporated by Act of Parliament. Session 1882-83.———Sixth Annual Announcement of the Saint Joseph Medical College. Winter Session of 1882-83 and Catalogue of 1881-82 of the St. Joseph Hospital Medical College and College of Physicians and Surgeons.———Rush Medical College, Chicago, Fortieth Annual Announcement. Session of 1882-83.———Announcement of the Second Annual Session of the Medical Department of the University of Denver. Denver. Colorado. Collegiate Year. 1882-83.———Forty-sixth Annual Announcement Medical Department of the University of Louisville. Session of 1882-83.———Annual Announcement Memphis Hospital Medical College and Medical Department of Southwestern Baptist University.———Combined Intra-Uterine and Extra-Uterine Twin Pregnancy. With an Analysis of Twenty-four cases and full extracts from the most important cases. By B. B. Browne, M.D. Baltimore, Md. Reprint from Vol. VI., Gynecological Transactions, 1882.———Medical College of Ohio. Cincinnati, O. Sixty-fourth Annual Announcement. Session 1882-83.———Michigan College of Medicine, Detroit. Mich. Announcement for Session of 1882-83.———Transactions of the Michigan State Medical Society for the year 1882.———The Philosophy of Insanity. Crime and Responsibility. By Henry Howard, M. R. C. S. L., England. 1882.———First Annual Announcement of the College of Physicians and Surgeons of Chicago. Session of 1882-83.———College of Physicans and Surgeons of Iowa, at Des-Moines. Announcement for 1882-83.———A Treatise on the Physiological and Therapeutic Action of the Sulphate of Quinine. By Otis F. Manson. M. D., etc. Philadelphia: J. B. Lippincott & Co. 1882. 12 mo.. pp. 164. Cloth. $1.———The Psychology of the Salem Witchcraft Excitement of 1692 and its Practical Application to our own Time. By Geo. M. Beard, A. M., M. D., etc. New York: G. P. Putnam's Sons. 1882. 16mo. square; pp. 112. Cloth, $1.00.———Second Annual Announcement of the Collegiate Department of the Minnesota College Hospital, Minneapolis, Minn.

TRANSLATIONS.

DIFFERENT FORMS OF ASYSTOLIA.

From the Clinical Talks of Dr. Henri Huchard.

When a patient presents symptoms of asystolia or of cardio-vascular asthenia, we are apt to prescribe at once digitalis; but it must be borne in mind that asystolia may depend upon various causes, and is associated with various symptoms, whence should be derived the indications for a variation in the treatment.

1st. Asystolia may be of cardio-vascular origin; it is then observed secondarily in the last period of mitral affections, much more rarely in aortic affections; it is observed primarily in affections of the tricuspid, or again in the acute or chronic dilatations of the right heart, which have been known under the name of *cœur forcé* (strained heart).

2d. Asystolia may be of pulmonary origin, developing in chronic affections of the respiratory apparatus (emphysema, asthma, bronchitis, etc.).

3d. It may be of gastro-hepatic origin, as affections of the stomach, intestines and liver have a real influence upon the right heart.

4th. It may be of renal origin, especially in cases of intestinal nephritis, where several factors may intervene to determine asystolic phenomena.

5th. Finally, asystolia may be of nervous origin.

A patient presents a mitral affection, well compensated hitherto, and is in the *eusytolic* period, according to the recent expression of Fernet; he contracts then a pneumonia, or a pleurisy, or a bronchitis, and then we see developed very quickly asystolic troubles.

Shall digitalis bear the burden of the treatment? Certainly not. All the medication should be directed against the accidental affection, truly the producer of the cardio-vascular asthe-

nia. Here the distinction is capital, and we have to do only with a transitory asystolia, with a passing failure of the heart. Another patient has been for months in a state of permanent asystolia; the limbs are everywhere infiltrated, the viscera are congested, the serous membranes are filled with liquid, the heart is extremely dilated. In the first place digitalis produced a good effect upon the diuresis, upon the cardiac contractions; but soon its action is exhausted, and in some cases it is injurious rather than helpful. It is then that other indications arise, which will be studied farther on, and that veritable resurrections may be effected by knowing how, at the opportune moment, to make a large bleeding, which will have for its result to remove obstructions from the general venous system, and restore to the heart fiber a part of its action and power which had been impaired and obstructed by the accumulation of blood in the cavities of the heart. Another patient, again, has an aortic affection, which has had its influence upon the left heart first, upon the right heart then, and especially upon the cardiac muscles; the precordial shock has become more feeble; but, nevertheless, the contractions of the heart do not present that ataxia which is noted in the mitral affections; it has relation to an aortic insufficiency of arterial origin; there may be paroxysmal attacks of dyspnea, of angina pectoris, which also have their necessary influence upon the heart muscle. Now in this case digitalis is sometimes utterly powerless, and morphine is thrice indicated to combat the symptoms of cerebral ischemia, pain and dyspnea; it becomes in these well determined cases the remedy for asystolia, and especially for nervous asystolia. It is then that one can say with M. Huchard that morphine is for aortic affections what digitalis is for mitral.

But if it is probable that in aortic affections morphine acts by effectively combatting the symptoms of cerebral ischemia, it is certain that administered in the last period of affections of the heart—be they aortic or mitral—in case where the cardiac muscle becomes more and more feeble, it acts by the stimulant properties upon the circulatory system with which it is endowed, recognized long ago by Hufeland and also by Sydenham, who called laudanum an "excellent cordial." If, then, digitalis is indicated, especially in the cases where asystolia is

accompanied with a certain state of ataxia, with precipitation, irregularity and tumult of the heart contractions, if it is to take the title of a regulator and moderator agent, it is in cases, on the contrary, where, as Gubler has so well said, the asystolia is accompanied with a certain degree of cardiac paresis or *cardioplegia;* the contractions of the heart are less irregular, but much more feeble, the valvular sounds are rough, the precordial shock insensible, the tendency to syncope almost continual. It is then that we should have recourse to alcohol, to stimulating drinks, to subcutaneous injections of ether, to injections of morphine, to frictions, and to a remedy whose use in large dose has not been sufficiently recommended. I refer to caffein.

M. Huchard presented to his class a patient with mitral stenosis and tricuspid insufficiency, consecutive to a pulmonary emphysema, who had been under observation nearly ten months. Last year, on her entrance into the hospital, she was in a most serious condition: almost complete asystolia with considerable infiltration of lower and upper limbs, ascites, edematous congestion of the lung, albuminuria, imperceptible pulse; absent precordial shock; beating of the heart so feeble that one would suppose there might be liquid in the pericardium, evening attacks of orthopnea such that often one would think the patient must succumb. Now digitalis in all its forms, in powder, tincture, in maceration, was absolutely powerless: morphine would calm the attacks of dyspnea; but it was caffein which, employed in increasing doses from twenty-five centigrams to one gram daily (grs. iv-xv), has preserved the patient now four or five times from these so threatening attacks of asystolia. Caffein not only excites the contractility of the vessels and of the heart, but it also acts as a diuretic; and so it was that its employment was followed with most complete success in a patient of Gubler affected with mitral and tricuspid insufficiency alike. But it has hitherto been employed in doses altogether too small. It is necessary, according to M. Huchard, to commence with twenty-five centigrams (grs. iv) and increase to one gram (grs. xv) or even more. Under the influence of this remedy the quantity of urine always notably increases; the albumen and urea diminish, but not in any regular ratio.—*Jour. de Méd. et de Chirurg. Prat.*, Jun., 1882.

SPONTANEOUS FALL OF THE NAILS IN AN ATAXIC PATIENT.

Dr. Roques communicates the following interesting case: Charles T., 45 yrs. old, servant, entered the hospital in February, '82. He had complained for a year with pain in the left side and left arm continuous, but having exacerbations somewhat severe, but having slight analogy with the so called fulgurant crises. Some time later he complained of pains in the bladder, frequent desire to urinate, of dysuria, to which was added at times a sense of weight at the anus, of veritable tenesmus at the moment of defecation; about this epoch appeared disturbances of vision.

At the time of admission, he complained always of a precordial pain, with shooting pains toward the shoulder and the left arm, involving especially the distribution of the ulnar; the little and ring fingers were particularly the seat of creeping sensations or of very acute lancinating pains. These special shooting pains are frequent, as we know, in angina pectoris. But besides the fact that the painful crises are not intermittent and do not excite a sensation of terror and anguish, as in this last, we have found nothing either in the heart or aorta which can explain it. The neuralgic pain, affecting the ulnar nerve, has been noted in some cases of ataxia.

In the lower limbs we noticed plantar anesthesia with the subjective phenomena which it provokes, anesthesia of different parts of the limbs irregularly distributed; here little marked, there complete, always more pronounced upon the left; very appreciable diminution of thermic sensibility; suppression of patellar and plantar reflexes on the left, and then diminution upon the right.

The disturbances of vision were evident: the left eye was much more readily fatigued than the right, the left pupil was dilated, the vision on that side was indistinct; objects appeared obscured by a fog; there was neither strabismus nor diplopia. No opthalmoscopic examination was made.

In the dorsal decubitus, movements of the upper and lower limbs were made with force and precision, even when the eyes were closed. The gait was a little unsteady, which was due

without doubt to the plantar anesthesia; the sole of the foot dragged a little upon the ground, but the foot was not raised suddenly nor thrown outward, nor did the heel drop sharply; in a word, there was nothing of the gait of the ataxic; closure of the eyes did not modify the gait nor disturb the equilibrium of the patient in standing.

It is clear that the signs, sometimes considered essential and upon which we depend for the diagnosis of locomotor ataxy, were absolutely wanting. Nevertheless the pains and anesthesias, the visceral pains which were substituted during a certain time by dysuria and anal tenesmus, the disturbances of vision, finally, and especially, the suppression of patellar reflex, appear sufficient to cause the recognition of ataxia, but a modified ataxia with irregular beginning and abnormal form.

This being granted, there is a curious lesion to which I desire to call your attention, which has for its site the two great toes.

The nail of the left great toe presents a deep violet color, especially about the base, due evidently to an ecchymosis under the nail, and has the appearance of having received a severe injury. The blue color, more marked at the base of the nail, extends to the fold of skin which covers the matrix. At one point toward the external border the nail commences to loosen, a slight traction would suffice to detach it; its separation is evidently near. The same lesions exist upon the right great toe, but less pronounced. This lesion of the nail is developed spontaneously. The patient denies having received any injury; he has not been exposed to intense cold, which removes all idea of freezing; that, moreover, produces special lesions, distinct from those here observed. We cannot invoke here, according to the patient, the action of too narrow shoes. In the commencement, without known cause, he experienced a sensation of creeping in the toes, a peculiar sense of numbness. He rubbed it with spirits of camphor, and after three or four days he noticed that the toe assumed a dark color, which grew more and more pronounced day by day.

Although the lesion has all the appearance of spontaneity, we may yet question if traumatism be not a part in its production. Our patient has anesthesia of the plantar and dorsal re-

gion of the toes. This being so, would it not be possible that a little longer walk than usual with a shoe a little tight and hard has produced a traumatism of the two great toes, without the patient being conscious of it, and that the subungual ecchymosis developed without the accompaniment of pain?—*L'Union Med.*, July 6, '82.

ANURIA FROM OBSTRUCTION OF URETER BY CALCULUS, TREATED BY APPLYING RUBBER BANDAGES TO THE EXTREMITIES.

Dr. Reliquet had a patient, about fifty years of age, with no history of gravel or gout in his family. He for twenty years at intervals has had attacks of gout in the feet, hands, and sometimes in the knees. Since 1868, nephritic colic, followed with evacuation of calculi, seemed to alternate with the attacks of gout. During these twenty years, he spent several years in the tropics, where he suffered from malarial fever, and was once obliged to return to France, to be treated for a serious hepatitis. The attacks of gout and nephritic colic persisted when abroad as well as at home. For a long time the colics were entirely on the left side. For the last five years they have been solely on the right. The calculi were shown by analysis to consist of uric acid.

Dr. Reliquet first saw the patient on the evening of Sept. 10, '81. He appeared well but very much disturbed. He stated that he had just had a violent nephritic colic on the right side, which had commenced September 6; that suddenly the pains had ceased about midnight Sept. 8; that the next morning at six o'clock (Sept. 9) he had urinated for the last time rather less than a pint of amber-yellow, transparent urine of normal appearance. He could not pass any urine then at all, and since six o'clock that evening he had had no desire to urinate.

He felt a little discomfort in the right flank when pressed upon. Moreover, this region was the site of an actual swelling, with a diminution of resonance extending down into the iliac fossa, but it could not be accurately limited, as is often very easily done in a hydronephrosis due to obliteration of the

ureter by a calculus. Emptying the bowel with an injection did not make this swelling any more distinct. A catheter introduced into the bladder showed that viscus to be empty.

All the usual methods of treatment in such cases were resorted to—vapor baths, followed by general rubbing; wet cups were applied over the right loin; copious drinks of milk and diuretic waters.

The next morning at nine o'clock they showed me a small quantity (about a cubic centimeter) passed by the urethra at several efforts, and dried up very quickly upon the sides of the vessel. Rectal temperature 99.6°; pulse 90. Vapor baths and friction to the surface were repeated. Not a drop of liquid from the urethra during the day. The same treatment was continued with no particular benefit to the patient. In the evening of Sept. 12 it was found that no satisfactory result had been secured. It seemed best then to seek to increase the tension in the arteries by every means available, for which purpose it was ordered that he should have small, frequent, iced enemata, and drink freely of iced drinks. Prof. Bouchard suggested that firm pressure should be made upon the lower extremities with rubber bandages, so as to force the reflux of the blood into the arteries of the trunk.

In the morning of the 13th no result had followed from the iced injections and drinks. At noon rubber bandages were applied firmly from the toes to the pelvis. The legs were kept raised up upon a chair in the bed. For a few minutes the patient manifested no discomfort; but soon respiration became more frequent, the face seemed to swell, the eyes became prominent; then there was a precordial oppression becoming more and more marked. Then the general anxiety was at its height. The patient spoke with difficulty, his eyes were staring and prominent, he felt as if suffocating; the rubber bandages were removed as quickly as possible and his legs were lowered. Calm was soon re-established, but a precordial oppression persisted. The heart sounds were rough, the pulse soft. In the evening, hot bath, cold drinks and cool injections were administered. When still in the bath he vomited bilious matter with the fluids that he had drunk. Pain in right loin. Nausea persisted. At one o'clock that night the patient began to urinate, at first a little glassful, then at four efforts in the course of an

hour a vessel full. Five little calculi were found in the bottom of the vessel.

The patient had an attack of gout after this. Dr. Reliquet reports also with fewer details a case in which the same treatment, repeated four times, was partially successful, but the patient died without passing the calculi.—*L'Union Méd.*, May 23, 25, '82.

REPORTS ON PROGRESS.

SURGERY.

Belladonna in the Treatment of Hernia.—W. S. Batten reports two cases in which belladonna was used successfully in the treatment of hernia. The first case was that of an old man 79 years of age, who had suffered from hernia for several years. On some unusual exertion he felt the rupture give way, suffered great pain, lay down, and made hot applications to the parts, which, on previous occasions, had given him relief. He continued to treat himself in this way for several days, but there was no evacuation of the bowels, and stercoraceous vomiting set in. Dr. Batten was called in and tried all the customary modes of reducing hernia, but was unsuccessful, as the patient refused to take chloroform. He was then removed to the hospital after taking two grains of opium. There a consultation was held, and the decision reached was that operative interference offered the only chance of saving the patient's life. To this, however, he refused to submit. He was then given half-dram doses of tincture of belladonna every half hour. In three hours the pupils were largely dilated; there was marked dryness of the throat, and the hernia was returned without difficulty. On a subsequent occasion, where the same condition existed in a slight degree in the same patient, three doses of the tincture of belladonna at half hour intervals made it possible to reduce the hernia with facility.

The second case was that of a pale, pasty youth, aged 19, who had been ruptured from childhood. When lifting a heavy load

the hernia came down by the side of the truss and could not be replaced. Taxis was attempted after the patient had been fully relaxed by being placed in a hot bath, and then when under the influence of chloroform. Twenty minim doses of the tincture of belladonna, repeated every half hour for four hours, made possible the reduct on of the hernia.—*Brit. Med. Jour.,* July 15, '82.

Treatment of Hemorrhoids by Injections of Carbolic Acid.—Dr. Charles B. Kelsey remarks that, beginning this plan of treatment without very much confidence in it, and with the fear of causing great pain, and, perhaps, dangerous sloughing, constantly before him, the method is constantly growing in favor with him, and the more he practices it the more confidence he gains in it. With solutions of proper strength the danger of causing sloughing of the tumor is very slight. There are no objections to this method which do not apply equally to others. He has once seen considerable ulceration result from it in the hands of another; but he has seen an equal amount follow the application of the ligature; and he does not consider this as a danger greatly to be feared when injections of proper strength are introduced in the proper way. It is applicable to all cases; is especially adapted to bad cases; and may be used where a cutting operation is inadmissible. It acts by setting up an amount of irritation within the tumor which results in an increase of connective tissue, a closure of the vascular loops, and a consequent hardening and decrease in the size of the hemorrhoid. Except when sloughing occurs, the tumors are not, therefore, removed, but are rendered inert, so that they no longer either bleed or come down outside of the body. In cases in which the sphincter has become weakened by distension, the injections will also have a decided effect in contracting the anal orifice, as injections of ergot and strychnine do in cases of prolapsus. He has used this method of treatment now many times, and has never, except in one case, had reason to regret using it or to be dissatisfied with its results, so far as he has been able to follow them. Although slow to advocate any one treatment of this affection to the exclusion of all others, he now generally adopts this from the outset in each case, reserving Allingham's

operation for any in which the injections may fail. As yet he has met with no such case. Its advantages over all other methods, provided its results prove equally satisfactory, are manifest. The patient is not terrified at the outset by the prospect of a surgical operation, is not confined to his bed, and is not subjected to any suffering. The cure goes on painlessly, and almost without his consciousness. The method requires some practice and some skill in manipulation, in getting a good view of the point to be injected, and in making the injection properly; but this is soon acquired; and he is more and more convinced that the fear of producing ulceration is an exaggerated one, and that when ulceration is produced it is a result either of a solution of too great strength, or of one improperly administered. He uses a solution containing one part of carbolic acid in ten or fifteen of glycerine and water.—*N. Y. Med. Jour. and Obst. Rev.*, Aug., '82.

Carbolic Acid Injections for Hydrocele.—Robert F. Weir, in reviewing the methods recommended for the treatment of hydrocele, is disposed to favor that proposed by Dr. R. J. Levis, which consists essentially in the withdrawal of the fluid by means of an ordinary trocar and cannula, and then, with a syringe having a long slender nozzle, the injection into the tunica vaginalis of one-half to one and one-half dram of pure carbolic acid. If due care is used to prevent any of the acid from coming in contact with the external integument, the operation is almost absolutely painless; and the result has been almost uniformly successful.—*N. Y. Med. Record,* July 15th, 1882.

Intestinal Obstruction Treated by Opening the Abdomen.—Joseph Bell was called to see a girl, aged 16, who had been suffering for three days with vomiting and abdominal pain. The administration of purgatives had only aggravated the symptoms. The girl was well nourished, very patient and quiet, no symptoms of inflammation appeared, pulse and temperature were both normal. Abdominal palpation revealed nothing except a small deep-seated point of extra resistance about one and one-half inches to the right of the median line, just below the level of the umbilicus. There was no special tenderness there or in the flanks.

Dr. Bell at once feared that he had to deal with a case of intestinal obstruction, ordered solid opium in pill, a grain every fourth hour, no food but an occasional teaspoonful of milk, and hot fomentations to the abdomen.

The next day the patient seemed much better; vomiting had not returned, pulse and temperature continued normal, and pain was almost gone; but the resistant point still remained, and there had been no evacuation of the bowels. Enema cleaned out the lower bowel, but nothing more. The patient was then removed to the infirmary, and the diagnosis was endorsed by Dr. Afflech, the attending surgeon; but the symptoms were so slight, and there was so little constitutional disturbance, that two days more were allowed to pass, the treatment consisting of injections of oil per anum, and bismuth and opium by the mouth. Galvanism was also tried.

On Friday, Dec. 30, an incision, about three and one-half inches long, was made into the abdomen. Just below the navel a coil of intestine was found, reddened, swollen and already covered with lymph. This was cautiously drawn out from the incision, and it was found that a sharp turn or twist was obstructing its lumen. This easily untwisted. Next an intussusception was found, extending about four inches. This also was easily reduced. Still there was evidence of farther complication, and, passing his hand downward toward the right iliac region, the operator found what was doubtless the initial trouble, a tight round band, one and one-half inches in length, passing from one coil of intestine to another, thus forming a loop or noose, into which another coil had passed when empty, had filled and then could not return. This loop was divided without difficulty, and the bleeding ends were tied with catgut ligature. The peritoneum was cleansed, the wound stitched up, and the usual antiseptic dressings were applied. The patient was much relieved from pain when she came from under the influence of the anesthetic; but she soon began to fail, and survived the operation only about twelve hours. Dr. Bell thinks that an earlier operation might have saved the patient. —*Edinb. Med. Jour.*, July, 1882.

Bite of a Viper—Cure by Hypodermic Injections of Phenic Acid.—Dr. Sereins reports the following case: Madame J., a

housewife, 40 years old, was bitten May 26, 1882, at noon by a viper, on the outside of the left foot, under the malleolus; half an hour later there was an acute sense of burning at the site of the wound and along the leg, a sensation of constriction of the abdomen and in the epigastric region. Soon afterward she was taken with a sense of smothering and pressure in the throat; with nausea and then with vomiting of glairy, bilious mucus. The vomitings became incessant, and each one was preceded by a painful aura starting from the point wounded, ascending along the limb and shooting up to the stomach. A constricting band had been applied to the middle of the leg, moderately tight, and a compress moistened in an ammoniacal solution to the site of the wound. I reached the patient two hours after the bite was received. She was having constant attacks of vomiting, and was tormented by a sense of excessive suffocation; the skin was cold, bathed with sweat; the pulse small, feeble, 110 pulsations to the minute. There were just below the peroneal malleolus on the outer side of the left foot two little red punctures, and a little above a large bulla, full of serum, resulting from vesication, caused by the ammonia; the lower part of the leg was the seat of an enormous swelling and the skin was mottled here and there with yellow patches and ecchymotic points, scattered among vesicles. The patient complained of a keen sense of cold. I made four hypodermic injections with a solution of phenic acid in glycerine (half a dram to a half ounce), one at the site of the bite, the other three in the peripheric zone of the upper part of the swelling; then I administered the balance by injection. One hour later the swelling had diminished very appreciably, the vomiting grew gradually less, and finally ceased at six o'clock in the evening. During the night the patient slept a little. The next day the ligature was removed and the vesicles were opened, which gave issue to yellow serum. On the next day the patient seemed perfectly restored, and presented only a slight tumefaction of the leg, extending to the knee. There was no trace of vesicles, nor of yellow spots, nor ecchymosis. The rapidity of the cure is a matter of considerable interest.—*L' Union Méd.*, July 29, '82.

MEDICINE.

Carbonate of Ammonia as a Stimulant.—Dr. E. P. Brewer takes the position that the stimulating properties possessed by this drug are owing to evolution of free ammonia while in process of combining with the hydrochloric acid of the gastric juice.

In support of this view, he states that observations drawn from forty-nine experiments prove—

1st. Carbonate of ammonia, administered by the rectum, cellular tissue, and intestine, is almost completely robbed of its stimulating properties.

2d. By the stomach it acts with great power when we permit the full play of the acid gastric juice; the converse being apparent when we neutralize the acid of the gastric juice.

3d. That the ultimate results of the chemical union is a product totally different in power and latitude of action from carbonate of ammonia.

Analyses of blood made soon after the exhibition of a dose of carbonate of ammonia show an excess of free ammonia.—*Am. Jour. of the Med. Sci.*, July, '82.

Gelseminum in Rhus Poisoning.—Dr. Benjamin Edson finds the most satisfactory and efficient treatment of rhus poisoning to consist in a local application, such as the following:

R.—Acidi carbolici,	- - - - -	ʒss.
Ext. gelsemini fl.,	- - - -	ʒij.
Glycerinæ,	- - - - - -	℥ss.
Aquæ,	- - - - - - -	q.s. and ʒiv

M. Sig. To be applied on cloths kept constantly moistened with this lotion.

He also administered two minims of the fluid extract of gelseminum every three hours. The result was a speedy relief of pain and the burning, itching sensation that is characteristic of the affection, and a very rapid cure of the disease.—*N. Y. Med. Rec.*, July 29, '82

Tincture of Iron in Capsules.—Dr. A. W. Parsons suggests that when tinctura ferri chloridi is ordered, a corresponding number of empty capsules be ordered, and the patient be di-

rected to fill one and take it with a drink of water. He says that Planten's No. 1 capsules will hold ten minims each of fluid—*N. Y. Med. Record.*, July 29, '82.

[This would certainly be an easy method of taking a remedy which to some patients is exceedingly disagreeable, though we prefer to administer it in a quantity of water sufficient to dilute it so far as to prevent unpleasant taste or corrosive action on the teeth.—Ed. Courier.]

Amussat's Laxative Syrup.—The formula given below has never been published, but has been used for forty years by the Doctors Amussat, father and son, against obstinate constipation and in all cases where it is necessary to keep the bowels open:

℞.—Guaiaci ligni, - - -	100 grains,	1 part.
Cichorii intybi rad., - -	100 "	1 "
Lappæ minoris rad., - -	100 "	1 "
Rumicis patientiæ rad., -	100 "	1 "
Fumariæ, - - - -	100 "	1 "
Violæ tricoloris, - -	100 "	1 "
Senna, - - - -	500 "	5 "

Bruise the substances. Make an infusion for twelve hours with boiling water, five kilograms (5,000 parts). Strain and make a second infusion with three kilograms (3,000 parts) of water; strain with pressure. Filter the infusions and make with three kilograms (3,000 parts) of honey and three kilograms (3,000 parts) of sugar a syrup, which you will also filter and strain when it will mark 31 degrees on Baumé's hydrometer.

This syrup, of an agreeable taste, is to be taken in the dose of one or two spoonfuls daily.—*Gazette Hebdom., Lyon Méd.*, Jun. 4, '82.

Anti-Diarrheic Pills.—M. Huchard employs in his hospital service the following pills in chronic diarrheas, where the combined use of astringents, opium and ipecac is desirable:

℞.—Ext. rhataniæ,	
Ext. monesiæ,	
Pulv. calumbæ,	
Pulv. Doveri, - - - - -	ää ʒss.
Ol. anisi, - - - - -	gtt. ij.

M. ft. pill. No. 40. Sig. Six to ten daily.

Anti-Asthmatic Preparation.—M. Huchard finds the following mixture of service, especially when symptoms of bronchial catarrh are associated with the attacks of asthma:

℞.—Potass. iodidi, - - - - - ʒijss.
Tr. lobeliæ,
Tr. polygalæ, - - - - - - ää ʒijss.
Ext. opii, - - - - - - gr. jss.
Aquæ dsstillatæ, - - - - - ℥ixss.

M. Sig. A large spoonful morning and night.—*Jour de Méd. et de Chirurg. Prat.*, Jun., '82.

Treatment of Erysipelas.—G. F. Lydston, late of Charity and State Emigration Hospital, New York, finds that local application to erysipelatous inflammations afford more relief when hot than when cold. He uses sheet lint saturated with a solution of lead and opium as hot as can be borne, and removed as often as necessary to maintain an even degree of heat. He combines salicylic acid with the tincture of iron, or better still, uses the following formula, which is slightly modified from one proposed by Walls White in *The Practitioner,* in October, '79:

℞.—Ferri sulphat., - - - - - - ℈v.
Sodii salicylat., - - - - - ʒij.
Sodii acetat, - - - - - - ℈iv.
Glycerinæ, - - - - - - ℥iv.

M. Sig. ʒij–iv every two to four hours, according to circumstances.

This he finds less liable than the tincture of iron to disturb the stomach or cause constipation.—*Chicago Med. Jour. and Ex.*, July, '82.

Pathology, Treatment, Etc., of Scarlatina.—John A. Octerlony, after a careful and painstaking study of the subject, concludes with Dr. Eklund, of Stockholm, that the infectious agent in scarlatina has been discovered in the *plax scindens*, which consists of sporoidal cells, flat, oval or rounded, and either colorless or yellowish-white, having a distinct cell wall and a nucleus of a clear brownish color. As seen floating about in the fluid examined, they often exhibit rotatory or screwing or see-saw movements.

Very young infants are not so susceptible as children from two to ten years old. After the age of fifteen females appear to be more susceptible to the disease than males. A large number of persons are not at all susceptible to scarlatinous infection.

The most frequent mode of infection he believes to be the breathing of air of a chamber occupied by scarlatinous patients; but people may carry the contagion to others without being themselves affected.

The average duration of forty uncomplicated cases was six and one-sixth days.

He thinks there is some prophylactic value in small doses of salicylic acid.

In light forms of scarlatina little or no medicine is needed. Some cooling diaphoretic, with syrup of marsh-mallows, of lemons, or of red raspberry, properly diluted, may be prescribed.

In case characterized by moderate eruption and fever, cool or cold drinks may be allowed freely. A diet of milk, light soups and farinaceous materials. Lemonade is often very refreshing. If the throat is much affected he allows the patient to swallow bits of ice; and has a cold water compress applied to the front of the throat from ear to ear. This will often reduce the throat affection in a few hours. Inunction with sweet oil is used to relieve itching and burning of the skin. If the temperature runs up to 104°, the external use of cold water is resorted to at once. The following prescription, modified according to the age of the patient, is often of service: R.—Potass. citrat, ʒj.; syr. limonis, ʒiij.; spt. ether nitrosi, ʒj.; aquæ destillat., ʒj. M. Sig. Teaspoonful every 2 or 3 hours. Small doses of tinct. of aconite, say half a drop to a teaspoonful, may be desirable at times. Nervous excitement and sleeplessness may require Tully's powder, bromide of potassium or chloral.

In the more severe cases he has found it of advantage to give antipyretic doses of quinine. He prefers to administer three or four large doses at intervals of an hour, and then withhold it altogether. He regards quinine as a safer remedy for children than salicylic acid or the salicylates. He lays much stress upon the necessity of direct reduction of the temperature by cool or cold water.

Cold compresses are recommended for the throat, and, when the patient is old enough to gargle, chlorate of potassa and hydrochloric acid with honey dissolved in water may be used with advantage; or powdered sulphur or benzoate of ammonia may be blown into the throat through a quill when the ulcerative stage is reached. Early opening of abscesses when present; frequent syringing of the meatus with warm water when there is discharge from the ear. Beef tea, iron, wine, digitalis, are often needed. Depressing agents should be avoided.—*Am. Jour. of Med. Sci.*, July, '82.

To Increase the Efficacy of Male Fern.—Dr. E. Dieterich says that it has become known that the popular "worm-doctors," who use almost exclusively the oleo-resin of male fern, and who almost never meet with a failure, administer the remedy in conjunction with castor oil, instead of following it by the oil after one or two hours, as is usually done by practitioners. The object is to bring the extract, in an unaltered or undigested condition, in contact with the worm. The experiments which have been made by mixing one part of the oleo-resin with two parts of castor oil have been very successful. The taste is unpleasant, but may be disguised by filling into capsules of about forty-five grains each. The dose may be from six to eight or more (90–120 grains of the oleo-resin). It is best to empty the bowels on the preceding day by a mild purgative, preferably castor oil.—*New Remedies*, July, 1882.

The St. Joseph Hospital Medical College and the College of Physicians and Surgeons, of St. Joseph, have united under the charter of the former, with the name of the St. Joseph Medical College.

Railroad Accidents.—Mr. Forney stated, at a late meeting of the Master Car Builders' Association, that from 1,200 to 1,500 railroad employes are killed and from 5,000 to 10,000 injured every year, and the large proportion of these accidents take place in making up the trains before they leave the stations.—*Scientific American*, July 8, 1882.

SOCIETY PROCEEDINGS.

ST. LOUIS MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting April 4th, 1882—Dr. Montgomery in the Chair.

Scarlatiniform Rash Preceding Variola.

Dr. Hardaway.—I would like to call attention to an interesting fact in a diagnostic point of view which no doubt has been observed frequently by the members. It is the presence of a scarlatiniform rash which appears commonly on the abdomen, preceding the tubercle of small pox. I regard it as a very important point, and it is one that is not frequently mentioned. I have seen a good many mistakes made from confounding this rash which precedes the small pox with scarlet fever. The presence of the rash taken in connection with the other symptoms should make one very cautious, and lead him to expect the tubercles of small pox. The rash is apt to occur in cases of hemorrhagic small pox, which generally kills the patient. I saw a case in consultation not long ago which the physician had pronounced to be an attack of scarlet fever. When I saw the case there was almost universal hemorrhage into the skin. There was scarcely an island of healthy skin on the whole of the abdomen, chest, arms or legs. You couldn't put your finger upon a point which was free of hemorrhage. There was also hemorrhage from the nose, mouth, bladder and rectum, and the patient died in a few hours, before the small pox eruption occurred at all, but it was doubtless preceded by a scarlatiniform rash. Physicians who have never seen a case of this kind are apt to make a mistake. They are very easy to differentiate.

Dr. Leete.—I would like to ask Dr. Hardaway if the rash he has just called attention to is observed upon the abdomen before any other part of the body?

Dr. Hardaway.—I think it is.

Dr. Leete.—Sooner than upon the back?

Dr. Hardaway.—I think so. I may be mistaken in that regard; but it seems to me it is.

Dr. Leete.—It is common in scarlet fever for the rash to be observed upon the back or side upon which the patient rests, probably because that part is kept warmer than the rest of the body.

Dr. Hardaway.—I can't make a positive statement in that regard. I have observed it upon the abdomen.

Sarcoma of Jaw.

Dr. Prewitt.—On the 14th of March a woman came to me from Southwest Missouri with a tumor of the jaw—the right side of the head and face. Upon examination I found that it extended up to about the temporal ridge, and evidently passed beneath the zygoma, protruding near the angle of the jaw, a large soft mass. There were also cockscomb projections extending into the mouth, and almost filling up the pharynx. It had been growing, according to her story, about five or six months. The glands were not involved. It was evident from the rapidity of the growth and the position of the tumor that unless something was done the woman would not live a great while. I supposed it to be a sarcoma, originating possibly from the periosteum. I stated this to her and to her husband, who accompanied her, and told them that it would be a difficult matter to remove it, and that it would probably return if it were removed; but that she would certainly die if something were not done. The tumor was very soft and elastic, and her physician supposing that there might be a collection of pus had punctured it; of course nothing but blood came out. The lymphatic or submaxillary glands were not involved. There was no marked cachexia; but she told me that she had fallen off somewhat from her general condition. I thought that if the tumor were removed we might prolong her life for a time, even if the tumor did return. I made an incision, commencing about midway of the lower jaw, and carried it up in front of the ear to about the temporal region, turning aside the integuments. I found the tumor lay underneath the temporal muscle; and as I continued the process of peeling it out I found, as I had expected, that it was connected with the periosteum. I peeled out the whole surface from the side of the head, and

found that there was a section of the zygoma already absorbed and removed. There was simply a fibrous band across the tumor. I dissected the tumor down so as to lay bare the zygomatic fossa and external pterygoid plate, carried it down and then passed up behind the lower jaw, which was very thin through being partly absorbed. I disarticulated it and dissected the tumor loose from the pharynx, cutting off these cockscomb projections that extended from the angle of the jaw into the mouth, and laid bare the carotid artery. I struck no vessel of any size until I got into this region, when I punctured the temporal, and as I could not get at it to ligate it on account of the dense tissue, I ligated the carotid below. It seemed to me that the branches of the carotid artery had been absolutely absorbed by the growth. The patient is getting along very well. Almost the whole wound is uniting by first intention. She is able to walk about the wards. Under the microscope the specimen showed the spindle-shaped cells very nicely. I will say that after I had removed this I found that there were some fragments extending into the maxillary fossa. I removed as much of this as I could, and then applied the thermocautery as far as I thought safe to do. I don't know whether I destroyed it all or not. I think it is probable it will recur.

Dr. Maughs.—What is your experience, Dr. Hodgen, about the reproduction of sarcoma? Doesn't it always spring from the surface from which it originated? There is no self-producing property where a portion is left. They do not develop themselves again, but spring up from the point where they originated.

Dr. Hodgen.—That is a matter not easily told. I supposed that they grew because a portion had been left; that if all the growth was removed the probability of the reproduction was diminished.

Dr. Maughs.—I think that if this class of growths is reproduced it is always from the original surface from which it sprung, and not from a portion that is left behind that sprouts again.

Obstruction of the Bowels.

Dr. Prewitt.—I saw an interesting case in East St. Louis yesterday—a case of obstruction of the bowels. I was sent

for by a physician there to see a young man about 22 years of age, who, two weeks before, had been more or less constipated, and had taken two or more doses of purgative pills, and succeeded in getting the bowels to move once after the first dose perhaps, but after that failed to get any action of the bowels. Vomiting set in, and he had a great deal of nausea and pain in the bowels. When the doctor saw him he was convinced there was an obstruction of the bowels, and supposed it to be intussusception. He gave anodyne purgatives and warm water enemas to try and relieve the obstruction in that way. I didn't think there was intussusception, but there was an obstruction undoubtedly. Of course we couldn't know the exact condition of affairs. We might conjecture, but that was as far as we could go.

There was beginning tympanitis, rise of temperature, and quickening pulse. The vomiting still continued, and there being no amelioration of the symptoms, I stated that the only thing to be done was to open the abdomen and find, if possible, the obstruction. I laid my opinion before the young man, telling him the facts in the case, and he was very willing to have it done; so yesterday afternoon about five o'clock I operated. I found the small intestine greatly congested and distended. The colon was also greatly distended, and a portion of the ilium rolled out, looking very deeply congested, but as I followed it up the portion of the bowel above looked better, and I thought probably the obstruction was seated near the lower end. I found a large lump in the right pelvic region. I will say that before, during the examination per rectum, while I discovered nothing definite, I seemed to detect some little hardness, a little nodulation, not such as we would expect to find in a case of intussusception, but something a little unusual. The attending physician also felt this, and thought it was a mass of scybala in the bowels. I discovered this hard mass a little to the right of the iliac fossa, and with some little manipulation succeeded in lifting it up; and I found in the sigmoid flexure of the colon an appearance as if a string had been tied around the bowel and some mass spread up around it. It had thoroughly obstructed the bowel, and it was very evident that there was no relief for the condition except by operation. The bowels were very much distended, and it would have been an

exceedingly difficult matter to get them back into the cavity of the abdomen, so I made a puncture into the ilium pretty well down toward the ileo-cecal junction, and a quantity of gas and fluid fecal matter poured out. I afterwards sewed up the wound in the bowel and returned them to the cavity. I don't know what the result will be, of course, but in these cases the operation is almost always postponed until the bowels are distended and overfill the abdomen, and when they once get outside, it is an exceedingly difficult matter to get them back again. Ovariotomy, as Dr. Maughs says, is minor surgery compared with this operation, when you get a case where the bowels are distended in that way. It is an exceedingly difficult matter to get them back unless you make a puncture and let the gases out. In this case I made an artificial anus and allowed the contents to escape at once, instead of making a number of punctures, and of course I was enabled to get the bowels in with greater facility. Considering the age of the man (he was only 22) and noticing some little enlargement of the inguinal glands—the lymphatic glands of the groins—I suspected the growth to be syphilitic in character. He was too young to have a malignant disease. I asked the brother of the young man, and also the physician, if he had ever had syphilis, but they knew nothing of it.

Dr. Hodgen.—Where was the artificial anus made?

Dr. Prewitt.—In the ileum, well down towards the colon. Of course there is no question that colotomy would have been the thing to do. It is a comparatively safe operation. I thought of making an opening into the colon, and don't know but what it might have been a better operation; but under the circumstances I thought at that time that it was proper to make it in the small bowel.

Dr. Montgomery.—I remember seeing a celebrated surgeon of Edinburgh, in 1836, perform an operation of this kind. He made an incision in the abdomen, and the bowels run out, and he had a great deal of trouble in replacing them; he succeeded, however, and the patient got well. I would like to ask the doctor if he felt the lump before the tympanitis occurred?

Dr. Prewitt.—No, sir; the attending physician thought he had felt it in the left iliac region, but it seemed to disappear on pressure, so that it might have been a coil of intestine, and I

suspect I felt the same thing when I examined per rectum. I thought I felt something irregular, some hard lump of a nodular form; I couldn't be sure of it.

Dr. Montgomery.—I would like to hear an expression of opinion as to the therapeutic means to be resorted to in these cases. In my opinion we should be very emphatic in cautioning the practitioner against giving strong drastic purgatives in these cases. I have been in the habit of making applications of cold. I place pounded ice in a bladder and apply it to the part, and give anodyne purgatives. It is a very safe method. I have a great deal of faith in injections.

Dr. Prewitt.—I wish to say that I am convinced there is no more pernicious practice than the use of purgatives in these cases. Somebody suggested to the physician in attendance the propriety of using a pound of quicksilver, which he very properly declined to do. I think the doctor who suggested it to him said that he had seen it used in another case, and that it relieved the patient. Now that is a very astonishing statement, that a patient should recover after the giving of a pound of quicksilver. I never heard of a case where it did good before. I think the use of quicksilver is unphilosophical and absolutely useless as a means of overcoming intussusception. The administration of purgatives in these cases would simply aggravate the trouble, because it stimulates the bowels to still greater peristaltic action when the peristaltic action is already in excess. In a case of this kind purgatives can do nothing but harm. There is no doubt that if the operation had been performed a week or ten days earlier the man's chance of recovery would have been a great deal better; there is no question about that. When I saw him, he had already begun to have a rise of temperature, with marked tympanitis and a condition closely bordering upon peritonitis. The bowels were intensely congested, so that the man's chances were diminished in a rapid ratio with every hour of delay. In regard to the point at which the bowel was opened I am not sure but what it might have been better to draw forward the colon just above the point of obstruction. I don't know that there would have been any special strain upon it, and experience has shown that in cases of colotomy it is not very material whether the opening is made in the left lumbar region or the right lumbar region, and sur-

geons have advised that in cases of this kind the incision in the bowel should be made without regard to the site of the obstruction. I don't know how far it would answer the purpose in a case of this kind.

Dr. Hardaway.—I would like to ask Dr. Prewitt, as he speaks of this condition as being probably due to syphilis, what particular lesion of syphilis he thinks it is?

Dr. Prewitt.—Syphilitic ulceration, possibly; infiltration possibly.

Dr. Hardaway.—You spoke of the glands of the groins being enlarged; do you regard that as an important point in the diagnosis?

Dr. Prewitt.—I only suspect from that, and because he was so young that we could hardly expect a malignant condition, that the trouble was due to syphilis. It would be very unusual to find a malignant trouble in a person 22 years old.

Dr. Leete.—I would like to ask if it is a common thing for syphilis so to express itself in this sort of constriction?

Dr. Prewitt.—Yes, sir, there are constrictions of the bowels due to syphilis. It is certainly not improbable.

Dr. Homan.—I would like to ask if it is not a common thing to have the inguinal glands enlarged where there is no history of syphilis?

Dr. Prewitt.—Very often. It cannot be taken as an indication without corroboration.

Dr. Maughs.—While probably it is not proven that this trouble was due to a syphilitic lesion, I see no objection to the supposition that it was. It is possible that it was the result of syphilis. In such cases the formation of gummata takes place on the mucous membrane of the intestine, and in that case we might have ulceration; but this is not common. It is not an ordinary condition. It is possible to have a formation of gumma there and for a stricture to result from it. No one claims that it is an ordinary occurrence. If I were to guess at the remote cause of the trouble I think I would probably agree with Dr. Prewitt, that it was probably syphilitic. I believe that purgatives should be given in these cases, as no one can tell in any case what is the cause of the obstruction, that is, it may not be possible. It may be an organic lesion, such as Dr. Prewitt found in this case; it may be a persistent spasmodic

contraction, or it may be due to the presence of hardened feces; and as we cannot know in every case what is the cause of the trouble, we should not neglect this ordinary remedy for the trouble. It is impossible to diagnose a case of intussusception, at least I have never seen one diagnosed. In this instance the pendulum has swung too far. It is not right to resort to croton oil and drastic purgatives, whereby the condition of the patient may be made worse; but it doesn't follow that we must reject the other purgatives that we usually give. I would lay down the aphorism that in obstruction of the bowels we should give purgatives. I would advise the giving of small and frequent doses of saline cathartics. I would also use large enemas of warm water for the purpose of moving the bowels.

Dr. Montgomery.—I agree that we ought to give saline purgatives. I think they are good. My objection is to the drastic purgatives.

Dr. Homan.—I want to ask Dr. Prewitt if hereditary syphilis would be likely to present itself in this way?

Dr. Prewitt.—I don't think it would.

Dr. Hodgen.—I was going to remark that the pendulum is apt to swing too far; it swings first in one direction and then in another. Dr. Prewitt intimated some time ago at the St. Louis Medical Society that a diagnosis might be made in some cases; Dr. Maughs has never seen a case in which a diagnosis has been made of the character of the obstruction.

Dr. Maughs.—That is where it is possible to determine that there is invagination. I am satisfied that it is not possible, and that there never was a case positively diagnosed.

Dr. Hodgen.—I have seen several cases in which there was no difficulty in diagnosing the cause of the trouble. I have seen it occur several times in the same patient, and after the first occurrence of such a condition, if it is relieved, one is not apt to be mistaken in the second attack. I have seen a case of invagination made out in which the attack recurred a number of times. The outlines of a tumor could be felt in the left lumbar region, extending into the left iliac. The symptoms indicated invagination; the patient was relieved, but the trouble returned in about ten months. In another case the invagination passed far down and could be felt in the rectum; it could also be felt above the brim of the pelvis in the left iliac region. There was

no question of the invagination in this case. Of course the diagnosis can not always be made out in these cases. In the vast majority of them it is impossible to determine positively the cause of the trouble, and we ought certainly not to operate except as a last resource. No one should operate without first using cathartics, and not without using a pretty active cathartic. An active cathartic may do harm, but it is certainly due the patient to try it. The chances are that the operation will be unsuccessful. A small percentage of success follows such operations. Such an operation is certainly justifiable, and ought to be done after all other means have failed. I do not wish to criticise Dr. Prewitt's operation. He knows far more about the case than I can know; but I was thinking whether it would not have been better, instead of puncturing the ileum, to have opened the colon in the lumbar region and made an artificial anus there. I don't intend this as a criticism: it wouldn't be right to make a criticism. I suspect I might have done as Dr. Prewitt did, had it been my case; but it occurred to me that the other operation might have been preferable.

Dr. Prewitt.—I will only say in that respect that it occurred to me, but there had been some little time spent in the operation, and it struck me that to commence a new operation for colotomy would perhaps diminish the chances of the patient. It is possible that it might have been better. I don't know; but it occurred to me that the chances of the patient might be better if I didn't perform colotomy.

In reference to the general treatment of these cases, I must insist upon it that when we are satisfied there is an obstruction of the bowels, purgatives are absolutely contraindicated. Now one of the symptoms of obstruction—and the most marked symptom perhaps—is vomiting, a vomiting of the contents of the bowels, and not merely of the contents of the stomach. We see that the bowels are doing their utmost to force the material away, and what earthly good can purgatives do in that case? It would simply stimulate the bowels to greater peristaltic action and cause more vomiting. The additional stimulation simply increases the return current and increases the chances of inflammation. If it is simply a case of constipation, where there is an overloading of the bowels, there is a better way to overcome it than by the use of purgatives;

and we can usually determine when it is a case of accumulated feces. If there is a quantity of fecal matter in the colon there is apt to be some in the lower bowel. It is hardly probable that there should be a large amount of fecal matter in the colon when there is none in the rectum. Doubtless there would be more or less fecal matter higher up, and then the question is whether the fecal matter is the cause of the symptoms of obstruction. The mere presence of fecal matter doesn't produce the symptoms of obstruction; it is only when the fecal matter accumulates to such an extent as to prevent the flowing away of the contents of the bowel above, when the colon becomes so filled with fecal matter that the peristaltic action fails to push the fluid contents of the small intestine onward, that we have symptoms of obstruction from that cause; and there must be an accumulation of a very large amount of fecal matter before such will be the case—such a large amount indeed as almost to enable us to determine its presence by simple palpation. I have seen cases where there was an enormous quantity of fecal matter accumulated below, so as to fill the entire colon and distend it throughout its entire extent, and yet there were no urgent symptoms of obstruction of the bowel. This condition may be relieved by gradually breaking down and washing out the fecal matter. The bowel may be distended to such an extent as to rupture the perineum. It requires a very large amount of fecal accumulation to produce symptoms of obstruction, and when this accumulation occurs we have a better way of relieving the bowels than by attempting to force the fecal matter out by pressure from above. We can do it better by injections and means of that kind.

Stated Meeting, June 6th, 1882.

Papilloma of the Larynx.

Dr. Todd presented a patient, and said: The point of interest about this case is that he was suffering from a papilloma, which almost filled the entire larynx, so that he could hardly breathe; there was only a little chink that was not filled with the growth. Some time ago I operated upon him several times and cleared the larynx. We can now see both the vocal cords.

Dr. Hardaway.—Did you remove it simply with the curette?

Dr. Todd.—No. I used a regular tube forceps.

Cancer of the Rectum.

Dr. Carson.—I have a specimen to present. It is a portion of the rectum which I took out on account of an epithelial growth. The patient, who was 45 years of age, came to the hospital last week, and stated that 18 years ago he had an attack of dysentery, diarrhea, etc. I suppose it was dysentery, and since then he has been constantly troubled. Lately the part has been so painful that, at last, on the advice of his physician he came to see Dr. Wortman, supposing that it was piles. Dr. Wortman attempted to make an examination, but told him it was necessary to treat him several days before he could make a thorough examination so as to determine the nature of the disease. After several days he succeeded in making an examination, and told him that it was not piles and he had better see a surgeon; so he came to the hospital. Upon examination I found the lower part of the intestine to be involved, as I thought, in cancerous disease. I could reach my finger in two inches and a half, and above that I could detect no disease. This morning I placed him upon the table and removed a portion of the rectum. Making my incision beyond the diseased mass, I dissected it down and found at the distance of an inch beyond the line of the lower portion of the mass of the disease a still further involvement of the intestine. I separated the intestine as far as possible and removed, as near as I could judge, about four inches anteriorly and about three inches posteriorly, leaving a portion of it behind. The separation was effected with the blunt handle of the scalpel and the fingers. This man told me that his father died from some disease of the rectum, of the nature of which he was not aware, but he says he had hemorrhages frequently, so I suppose it was cancerous also. Aside from this the family history was good.

Dr. Bryson.—I would like to ask if there is any history of syphilis?

Dr. Carson.—None at all; and the man stated positively that he had never had syphilis, nor were there any manifestations of syphilis to be observed. The abdomen was very flaccid, and

we were enabled to examine the contents through the abdominal walls very well. I could discover no enlarged glands at all.

Dr. Bryson.—How far back does the trouble date?

Dr. Carson.—From the war. During the war he was a soldier and had a dysentery—as he expressed it, a chronic diarrhea—and from that time to the present has been more or less troubled. He is a laboring man and has been laboring up to within a few weeks back—I think may be two weeks.

Dr. Bryson.—I would like to ask if there was any particular obstruction of the feces, or any difficulty in retaining them?

Dr. Carson.—There was no difficulty in retaining them; there was a decided difficulty in the passage of them. The injection that was given early this morning before the operation was retained up to the time of the operation. I had determined to save the sphincter before starting the operation, but upon a closer examination I determined it would be impracticable, so I made an incision including the sphincter.

Dr. Bryson.—I would like to ask one more question; that is whether the man has ever been given the iodides?

Dr. Carson.—That he did not know. He has been given medicines, but he does not know what they were. He stated positively that he never had any sexual disease. He is a man of quite a large family, and has a number of small children.

Dr. Montgomery.—Is there any liver complication?

Dr. Carson.—He has no jaundice of any sort.

Dr. Bryson.—I have seen several cases at the clinic down at the school of unmistakable syphilitic disease of the anus, and there appeared to be in those cases—in the first place—no congestion to amount to anything. There was a thickening of the skin that commenced sometimes in the anus and extended outward, and that condition would rapidly disappear under antisyphilitic treatment. It really had the appearance of a malignant growth, and had these patients not exhibited distinct evidences otherwise, I think it would have been mistaken for malignant growths.

Dr. Carson.—I will mention one peculiar feature of this case that I failed to mention before; it is the excruciating pain that this man suffered about the coccyx. In removing this mass this morning I noticed that the tissue in this neighborhood was covered with quite a number of small polypi.

Dr. Bryson.—The fact that syphilitic disease doesn't tend to suppuration is another point in the differential diagnosis between syphilitic and cancerous affections. I would like to ask Dr. Mudd how far he thinks it is justifiable to pull the bowel down, and how far up it is justifiable to cut?

Dr. Mudd.—In what condition of the bowel, Doctor?

Dr. Bryson.—In malignant disease.

Dr. Mudd.—I don't know that I can answer that; but I can give something of practical interest, I think, by relating a case that came under my observation about ten months ago; a case of a woman who had what I supposed was cancerous infiltration of the rectum and recto-vaginal wall. At the time that I saw her the induration had involved the entire sphincter, so that it had lost its function, and the contents of the bowel passed irregularly in bed. The induration and thickening of the recto-vaginal wall had extended to within an inch of the os uteri. The woman had been confined to her bed a year. She had a history of syphilitic trouble, but had had no manifestation of it during the last six or eight years, unless this be a manifestation, but it had passed beyond the question of mere syphilitic growths. After stating to her the difficulties and dangers of the operation, and the uncertain relief that might follow it—putting the blackest side before her—we operated upon her, and I removed the anus, rectum and recto-vaginal wall to within a half inch of the os uteri. I dissected out the tissues in the fossæ upon either side, and in doing that I took such precautions as I thought necessary to avoid hemorrhage. The vessels, you know, are quite abundant, and are quite large, and in making the sections upon either side of the rectum and recto-vaginal wall, I passed a wire through the rectum and through the recto-vaginal wall upon either side of the os, so that there were two double wire loops coming out, one end through the rectum and the other through the vagina on either side; these I tightened with the écraseur and in this way held the tissues very tightly. I made the section with the scissors and with the knife by cutting through the tissues not inside the wire loop, and then cauterized it with the thermo-cautery, and I had but very little bleeding. There was very little inflammation following the operation, the patient did well and improved from the effect of the operation. I didn't succeed

in removing all the growth the first time, so I made a second operation. There was quite a large portion of the wound unhealed at the time of making the second operation. I have not heard from her for the last two months, but it was healing very well when I last heard from her.

In this connection I would like to relate a case that came under my observation some ten or twelve years ago—the case of an old man in Southern Illinois, who had a cancerous infiltration of the anus, which extended out to the buttocks. In this case we made an extensive dissection. Dr. Hodgen also made an operation afterwards, and we removed the buttocks, removed the anus and rectum for perhaps an inch and a half. That cicatrized and healed entirely, and left a small round cicatrix over the anus, which continued to contract until it became difficult to defecate. The man was very intelligent and showed considerable ingenuity in the management of the case. He succeeded in getting an operation by means of injections and by dilating the opening from time to time. But the infiltration recurred and grew rapidly, and the difficulty in defecating became still more marked as it encroached upon the cicatricial tissue. A second operation was performed and the obstruction removed; the new tissue became inflamed and sloughed out in its entirety; this healed and again sloughed out; and so it sloughed three times. During the progress of the case, which lasted some four years, I think the gut must have been destroyed for a distance of six or eight inches, to which distance it was drawn down by the cicatricial contraction. During the first operation we must have removed an inch and a half. He ultimately succumbed to the disease.

Dr. Carson.—In this case the anterior portion of the rectum was so firmly fixed that we applied considerable force in our vain attempts to draw down the diseased parts; we couldn't reach all the diseased part with the finger, and we thought it useless to make a further dissection.

Dr. Bryson.—I have sometimes discussed in my own mind, not in connection with any case I have had, however, but I have thought whether, in case of malignant disease, where there is an obstruction of the rectum, or enlargement of the prostate, so that only tape-like feces can be passed, it would not be advisable to precede the operation by making an artifi-

cial anus—colotomy above in the groin, so as to give the parts time to heal, and give them rest until they did heal, if it would heal at all. I believe that in the future colotomy will become more popular, particularly since some cases have been reported where persons with artificial anus, where colotomy had been performed, lived very comfortably, did very well. One case related by an English surgeon is that of a lady who went into society and lived very comfortably. It seems to me it would be a decidedly advantageous thing to have the parts at rest under any circumstances, even if the artificial anus were made with the intention of closing up the wound above subsequently, provided the natural opening was established sufficiently.

Ulcer of Rectum.

Dr. Carson.—I noticed, I think in Smith's Operative Surgery, a case reported in which, for malignant disease, not only the rectum and anus, but also a portion of the base of the bladder was removed, and the patient made a good recovery. In speaking of colotomy, I have thought that in these cases of so-called non-malignant ulcer of the rectum, which are so difficult to heal in most cases, colotomy would be justifiable in order to allow the ulcers to heal. We can thus give the anus a rest until the ulcers heal. What does Dr. Bryson think of that?

Dr. Bryson.—I think it is generally understood on the part of authorities that it is a perfectly justifiable operation, and that they advise it, in order to heal the non-malignant ulcers of the anus where the entire anus is circumscribed, the entire rectum is involved, where the complete circle has gone into the process of ulceration. Where the operation has been performed with the intention of giving the parts rest I believe healing has invariably followed. I saw a case of that kind not long ago—I mean of non-malignant ulcer of the anus—in a patient who was brought to me by Dr. Staudinger. The patient was a stout, well-nourished farmer, who did quite hard work and lived very plainly. The cause of the ulcer couldn't be made out, but it was plainly non-malignant. The man was about 37 or 38 years of age, and I hesitated, of course, to advise colotomy in the case; but I did advise a complete division of the sphincter. I wanted to perform the operation,

but the patient couldn't stay in the city long enough. He went up the country to his home, and Dr. Staudinger afterwards performed the operation of complete division of the sphincter. He said it caused a profuse hemorrhage, which he had great difficulty in arresting. It is difficult to tell in that case where the hemorrhage came from. I suppose it was a general oozing from the tissues. The patient made a very good recovery. Had this operation of complete division of the sphincter not succeeded I certainly would have advised colotomy.

Dr. Carson.—If I am not detaining the society I will relate another case, which may be of some interest, as coming after the case Dr. Bryson has related. A gentleman presented himself to me some time ago. He has been under treatment some time. He first presented himself to me complaining of an ulcer on the leg—on the tibia between the knee and ankle. It had clean cut edges, not at all like syphilitic ulcer. He denied any syphilitic taint, but said he had had gonorrhea several times, and once had a chancroid, and had had an ulcer upon the foot, which had healed readily. Since that time he has had no indication whatever of taint of any kind, and was at the time he presented himself to me a strong, healthy looking man. I tried every means I knew of to heal this ulcer, and finally put him on the iodide of potash, and much to his surprise, he still denying any taint, the ulcer healed. Some time after this he complained of some trouble of the bowels, and upon examination I found an extensive ulcer, which to all appearances was syphilitic; and I will state here that it is a very difficult matter often to distinguish a syphilitic ulcer from one that is not syphilitic. In this case I pronounced it to be syphilitic, and I asked for a consultation. Dr. Hodgen agreed with me that it was syphilitic in character. We made a free division of the sphincter in this case, and the patient progressed well for a time; but after a time the ulcer came to a standstill in spite of all the treatment that was applied to the rectum or anus. I used caustic, iodoform, nitrate of silver and several other different medicaments; still there was no progress in the healing of the ulcer. Finally I gave him an injection of nitrate of silver—ten grains to the ounce. About this time Eureka Springs came into prominence, and he concluded to make a visit to Eureka Springs. He returned completely restored; whether

it was the effect of the Springs or not I don't know, but he is a great advocate of Eureka Springs now.

Dr. Briggs.—I will report a case of disagreeable ulceration of the bowels. A young woman disappeared from her home, and was discovered several weeks after in a very diseased condition. She had painful defecation and passages of blood from the rectum, and a slight ulceration could be detected by an examination of the parts, and I suppose it was one of those cases resembling a series reported by Gossling, a French surgeon, and published eight or ten years ago in a local journal here. I examined her as well as I could, and made arrangements for the usual treatment of the case. I put her under the influence of an anesthetic, and then by forcible dilatation of the anus—paralyzing the anus—and the use of the speculum, we were able to discover a very extensive ulceration. The case was treated with nitric acid, and afterward with chloride of zinc. It was necessary to repeat the application of zinc several times, and we gave an anesthetic each time. She improved under this treatment, and as I have not been called to see her for some six or eight months, I hope the improvement has continued. This was undoubtedly syphilitic in its character.

Dr. Holland.—I would like in this connection to report a case that I have been attending, and which has given me some trouble. It is a case of stricture of the rectum, and there is also a tumor in the neighborhood of the womb; it is thought to be of the broad ligament. You can just reach the stricture with the finger, which can be inserted half-way up to the first joint, and that is about as far as it will go unless the part is very much dilated. The womb seems to be perfectly fixed. For some eight or ten months I have had her under my observation. There is a question whether this tumor and this fixed condition of the womb has anything to do with the stricture of the rectum. Of course I can't say that there is any connection between them. If it is entirely distinct from the stricture it will have to be removed, as it is growing rapidly. I would be glad to have some discussion of the matter. In regard to syphilis, the history is not clear. I have had her under the iodide of potassium for some time, but it has caused no cessation of the symptoms. The stricture is getting worse all the time.

Dr. Briggs.—How much iodide of potassium do you give?

Dr. Holland.—She has taken about thirty grains a day at least for about six weeks. I can't find any good results from it.

Dr. Bryson.—I would like to ask the doctor if the rectal surface of the stricture is ulcerated?

Dr. Holland—No, sir; not externally, so far as the finger can go there is no ulcer. There may possibly be an ulcer on the other side; there is considerable tenderness at that point. The womb, also, is retroverted, and has been for some years. I presume she is 28 or 29 years of age, and has borne one child. The probe cannot be inserted the required length, and has not been for some time.

Dr. Love.—I will ask Dr. Bryson if he doesn't think larger doses may well be given than thirty grains?

Dr. Bryson.—I think so; there are some cases where thirty grain doses would produce no effect, while larger doses would; of course in this case there is a cicatrix and the iodide of potassium will not get rid of that. I don't see how it is possible for a tumor of the broad ligament to affect the rectum so far down as can be reached by the forefinger. I think these growths tend to go upwards, unless, of course, it is malignant; this tissue lower down may be affected secondarily, but my idea has always been—I am not familiar with that branch of surgery—but my idea has always been that these growths tend to go upwards out of the pelvis. I don't see how it could affect the rectum so low down as that.

Dr. Carson.—I don't think the tumor can in any way affect the rectum, and especially, as Dr. Bryson suggests, so low down. I have seen quite a number of large tumors of the broad ligament, but the rectum was not at all affected in that way. Two or three weeks back I saw a case of tumor of the broad ligament—a tumor projecting from within the folds of the broad ligament which was quite large, but there was no encroachment in any way upon the rectum.

Dr. Homan read a paper on the salient points of likeness between John Hunter and John Hodgen. (Vid. p. 121.)

June 13th, 1882, Dr. Briggs in the Chair.

Pelvic Tumors.

Dr. Carson.—I have a couple of interesting specimens to present. This is a fibroid tumor which was removed from the anterior lip of the uterus; it was growing in the mucous membrane, pushing the bladder upwards and backwards, forcing the anterior lip of the womb to the right, and forcing the mouth of the womb around and across the vagina, and filling almost the entire cavity of the vagina. It was removed by enucleation, the patient making a rapid recovery, and having no bad symptoms at all. Here we have an ovarian cyst or cyst of the broad ligament, which is interesting on account of its size and the length of time of its growth, and also on account of the endogenous cysts which were growing. When this cyst was tapped we drew off five large wooden bucketfuls of fluid of a dark olive green color, and about the consistency of syrup. The contents of the cyst weighed 100 pounds. It was tapped with an ordinary trocar. One bucketful of the fluid was weighed and an estimate made from that. One bucketful weighed 20 pounds, so that five buckets would weigh 100 pounds; it nearly filled a large wash tub. Since the tapping, at the time of the operation, a large quantity of fluid had accumulated. The cyst filled rapidly, and at the time of the operation we drew off one of the largest sized foot-tubs almost full of fluid. The pedicle was short, and had its attachment close to the left cornu of the womb, while the ovary, which was perfectly healthy, was fully a foot and a half from the pedicle, and was attached to the tumor only by connective tissue, and the only change that appeared in it was that it was very much congested. Some eight or ten ligatures were necessary to control the hemorrhage. The patient did well enough for some time, having no bad symptoms for the first three days after the operation. The temperature rose once to 103°. It was for most of the time 101° and 100°. On the sixth day the patient died from exhaustion. The fluid which came from this cyst was of a dark olive green color, and on being heated became solid. When we take into consideration the length of time it had been growing, seven years, we would diagnose a tumor of the broad ligament.

Dr. Maughs.—The tumor doesn't present the appearance of a cyst of the broad ligament, and it is a very rare thing for them to contain such fluid; they almost never contain endogenous cysts or colloid substance. I suspect that the cyst at some time had some connection with a Graafian follicle. The whole cyst appears to be a large sac filled for the most part with water, and the presence of the endogenous cyst and the colloid substance point, I think, to the origin from a Graafian follicle.

Dr. Carson.—The ovary was not increased in size, and there was nothing peculiar about it but the extreme congestion. I can't see how it could have been connected with the ovary. The pedicle was attached close to the womb. Dr. Schenck was present at the operation. The ovary was separated a foot and a half from the attachment of the pedicle. I don't see how it could have its origin from a Graafian follicle; there is no way of determining that positively, however. As Dr. Maughs remarked, the tumor certainly does appear like an ovarian cyst—a monocyst, and doesn't present the usual characteristics of a cyst of the broad ligament, except in the length of time of its growth. It is very seldom that we find an ovarian cyst that grows for seven years. The microscope showed no corpuscles; nothing except mucus, some pus corpuscles and blood.

Dr. Maughs.—I am decidedly of the opinion that it was at some time, in some manner or other, connected with the ovarian stroma; it makes no difference if it was a foot and a half or ten feet from the ovary at the time; and while it is unusual for ovarian tumors to be so long in growing, an ovarian tumor has been observed to be six years growing. The woman had noticed it six years, a dermoid cyst of the ovary.

Dr. Carson.—It is not known how long dermoid cysts of the ovary are in growing; some are supposed to be congenital. Some have been known to exceed thirteen years.

Dr. Curtman read a paper on Bacteria, illustrating it by the magic lantern and oxy-hydrogen light. (Vid. p. 97.)

Dr. Gross says that if the negro race can develop a great physician in a hundred years, it will prove its vast superiority to the whites, as they have required some two thousand years to accomplish the same feat.—*Med. and Surg. Rep.*, June 10, 1882.

NOTES AND ITEMS.

Hodgen Memorial.—We are informed by the gentlemen having in charge the collection of funds for the Hodgen Memorial that many physicians in this and neighboring states have not been heard from. The list of contributors ought to contain the name of every reputable Western doctor, and we hope ere long none will be missing.

Complicated Formulæ often nullify themselves by containing ingredients intended for the liver, kidneys and skin, which ought all to act about the same time. We should act upon each of these alternately, in quick succession, if we think best, but let each organ feel the full impression of its remedy before the blood and nervous energies are directed to another. —Byford *in Diseases of Women.*

At a Meeting of the Moberly District Medical Association at Moberly on June 6th, 1882, the following resolutions were unanimously adopted:

Resolved by the Moberly District Medical Association, that we hereby utter our protest against and emphatically condemn the action of the New York State Medical Association in authorizing affiliation with non-regular practitioners; and we reaffirm our adhesion to the Code of Medical Ethics adopted by the American National Medical Association.

The following resolutions concerning the death of Dr. John T. Hodgen were offered and adopted:

Be it resolved, That in the death of Dr. John T. Hodgen the medical and surgical professions at large, and particularly of the Mississippi Valley, have sustained an irreparable loss, but he has left to the profession, by his example, a great legacy.

Resolved, That we hereby extend to his bereaved family our deepest sympathy in their great sorrow.

G. M. Dewey, President.

N. M. Baskett, Secretary.

Danger in Sleep.—The danger one incurs by sleeping with his mouth open, without protecting it by proper safeguards, has recently been exemplified at Brünn. A workman called upon a Dr. Flaschel of that town, and stated that for almost forty years his digestive organs had performed their functions perfectly well; but for five days they had undergone a sudden change. The day before he experienced this difference, after having worked hard, he crawled into a hay-mow and there fell asleep, but was suddenly awakened by a difficulty of breathing and violent pains in the stomach. The latter continued to annoy him; he lost his appetite, and felt generally indisposed. The doctor prescribed for him, upon which he went to a neighboring inn, where, after an attack of severe pain, he vomited a medium-sized dead mouse.—Berlin correspondence of *Monthly Rev. of Med. and Phar.*, June, 1882.

Man as a Machine.—Already in the first man who trod the soil of our planet the great mechanical and chemical discoveries of uncounted coming ages were anticipated. His tissues were woven in a loom no Eastern fingers, no Western machinery could rival. Where strength was needed a power of resistance like that of iron was given to strands of fibers finer than the spider's thread, seen only as it glistens in the sunbeam. Where elasticity was wanted a substance-like caoutchouc exuded and solidified. The pillars which support his frame would crumble under it, were they not many times stronger in substance than the columns which support his temples. The leverage of his limbs is adjusted to his needs with an audacity which no engineer would venture. The hydraulics of the circulation are but clumsily imitated in our aqueducts and their distribution. And what are all the flood-gates of human contrivance compared to those delicate translucent valves which we were so recently studying, which stand guard at the mouth of the great artery, and arrest the solid column of blood coming back upon them like the blow of a hammer day and night, seventy times a minute, for seventy years, and so many more as life may spare us? Man is more than a machine, but as a machine he is an ever-present miracle. His heart is a timekeeper which counts the seconds for a century with one winding up. The heating apparatus of our dwellings in the surfaces of its

radiators and the pots of its furnaces only repeats the vulvulæ conniventes and the villi of our own mucous membranes. No telephone conveys a message so faithfully as the membrane of the tympanum transmits it to the listeners in the recesses of the labyrinth. No steam engine can work with so little fuel as the human organism; no dye-house can reproduce the glow of a youthful cheek; no laboratory can manufacture a grain of albumen; no musical instrument can reach the human heart like a woman's voice; no lens can adapt itself to light like the human eye.—O. W. Holmes in *Bost. Med. and Surg. Jour.*, June 1, 1882.

The Birth of an Elephant.—Dr. Gustavus E. Sussdorff, of New York, contributes to the July number of the *New York Medical Journal and Obstetrical Review* an account of the process of parturition as it took place in the case of the elephant "Queen" last February. The period of gestation was 597 days. There was no noticeable enlargement of the abdomen until it suddenly became quite prominent the day before labor began. This enlargement did not subside with the expulsion of the fetus and after-birth, but continued four days longer. During the latter months the mammæ became swollen, and soon filled with serous milk. These were the only signs of pregnancy to be seen. The labor began at 3 P.M., February 2d. At this time the mammæ were greatly distended with milk, which came away continuously in drops. The vagina now began to drop down and swell. In a short time thick mucus began to come from the vagina in long ropy strings, and almost poured out just before delivery. From 3 until 8 o'clock "Queen" was evidently uneasy, as she constantly moved her body from side to side, but did not seem to suffer pain, and quietly munched some hay up to the very moment of delivery. At 8:10 the young elephant was born, the head presenting, completely enveloped by the unbroken membranes. The head and part of the body rested between the hind legs of the mother, and touched the ground. Without waiting a moment the mother ruptured the membranes with her two hind feet, when the young one rolled out, on its back. The membranes were no sooner liberated than they quickly returned into the vagina. The umbilical cord had not

been seen at all, having probably been torn away by the descent of the fetus. The mother now quickly turned to the young, and, on seeing it, began to roar and bellow furiously, which she continued for ten minutes. As soon as she saw the baby she also at once placed one fore foot on it and rolled it several times, as one does a lemon under the palm of the hand, the bellowing and roaring continuing. In a moment or two more, she placed her abdomen upon a short post in the ground, to which she was chained, standing almost upon her head, and grasping the post with her trunk, thus forcing the abdomen with great power against the post. "Queen" remained in that position for about ten minutes; then became quiet, and, while playing with her young, took some food. Nothing indicative of after-pains could be recognized after this, and in one hour and thirty minutes the placenta was expelled. With it came about two quarts of clotted blood. There was no hemorrhage either from the uterus or from the umbilicus of the calf. The duration of labor was five hours and ten minutes. The calf, a female, weighed 245 pounds, and stood just three feet high. It began nursing one hour and forty minutes after birth. It had two middle upper teeth. The umbilical cord entered the abdomen about three inches anterior to the vagina, and had been detached very close to the abdomen, as none was visible at that point, the canal being open and large enough to admit a good-sized finger for half an inch. Dr. Sussdorff remarks that there are several very interesting and instructive points in this history. First, the period of gestation is evidently not affected by the change of climate and captivity, lasting about nineteen and a half months. The time of labor is short, and evidently there is not much pain. The sagacity of the animal is remarkable, as shown by the manner in which she ruptured the membranes, the means she took to excite respiration by rolling the young, and, finally, her effort to express the placenta from the uterus. He then describes the placenta and the fetal membranes, comparing them with those described by Owen, and adds a summary of various observations that have been made of the milk of the elephant as compared with that of other animals, giving drawings which show its microscopical characters in comparison with those of cow's milk.—*N. Y. Med. Jour. and Obst. Rev.*, July 8, '82.

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ORIGINAL ARTICLES.

USE OF HOT-WATER INJECTIONS IN UTERINE DISEASE, WITH SPECIAL APPARATUS FOR ADMINISTERING THE SAME.

BY P. V. SCHENCK, M. D., ST. LOUIS.

[*Read before the Missouri State Medical Association.*]

I WISH to introduce the subject of hot vaginal injections in uterine disease, and at the same time present for your approval a diagram representing the form of Vaginal Douche which I have used in the Female Hospital in St. Louis, an institution over which I have charge.

The early use of vaginal injections indicates the demand for them; as to who first employed them, we have no record. Hippocrates, we are told, was not ignorant of intra-uterine injections; but a careful reading of the reference shows plainly that the term he applies, and which has been translated *womb*, in reality refers only to the vagina.

Now what are the conditions we find in the womb to be met by treatment? Perversion of function is the germ of

uterine disease: what are the functions? and what do their perversions produce?

1st. Menstruation, with its periodical congestion and fatty degeneration. Menstruation finds its cause in the nervous system. We have congestion, arterial pressure. The nerves and blood vessels are peculiarly arranged; the uterine artery, with the return vein, passes through and underneath the constrictor muscle of the cervix; this muscle compresses the lymphatics and nerves. There is no one organ so sensitive as the womb to the tension-producing power of its vascular system; congestion of the organ is due to a loss of tone in the vessels; vascularity of the parts with which the trophic nerves are connected is produced by irritation of these nerves. Not only this, but, as Emmet contends, the vessels in other parts are decreased in calibre; thus the general blood pressure is increased, and the blood is sent in greater force to the hyper-vascular area. In inflammation there is local vascularity, arteries enlarge in location of inflammation. Lawrence found that blood would run more rapidly from an arm inflamed than from one that was not. In the process of inflammation there may be a disturbance in the innervation of the blood vessels, and thus hyper-vascularity may be produced. The pathological condition of the womb has in a marked degree, as an etiological base, a fullness of the vessels, an exaltation of the nervous power: this point of congestion has been named a nerve turmoil—the disturbances of the circulation and secretion are necessary sequences.

2d. The function of gestation. During this period there is a vital erection; tapping the uterus at any one point may draw blood from the whole organ; every kind of nerve is included in the utero-vaginal tract. There is a sympathy between the cervix and fundus; irritation produces in the body contractility and retractility. The uterus is a centre of fluxion. The os and fundus being supplied by branches of the same nerve, influences acting

upon the os and cervix will produce congestion. Next take the traumatic injuries to the womb by the function of parturition illy accomplished, and we have opened before us a Pandora box of ills. Next the process of fatty degeneration; a lowered vitality may cause inflammatory processes, and there is no definite line between increased nutrition and interference with health. The process of repair is often one of danger; the waste material, the process of involution, is as productive of disease, if illy performed, as any other condition of the uterus. The greatest study we have before us is that of uterine nutrition, as it is set forth in the womb, both in its growth and in its decrease. An increased vascular supply, if uncontrolled, will end in disease, and many of the diseases of the womb are but "nutrition run wild." Add to disordered function the productive causes, as habit, occupation and dress; the dancer, the theater goer, the languid novel reader, whose mind is fed on unhealthy mental food, whose ovarian brain is stimulated at the expense of the cerebellum. On the one hand the rich, whose occupation is to consume time, to dress for admiration and flattery, to appear always in the character of some one above them in rank. On the other hand the poor, whose hands and feet must make for them a livelihood, sitting in a constrained position, with needle in hand, to stitch, stitch, stitch; or with hips boxed in a sewing machine, or standing all day until night, and then return home with backache produced by the blood called in excess to the pelvic cavity; also exposure to heat in cooking and washing—even in the matter of clothing they heat up the pelvis: all these things produce congestion, and ultimately a relaxed condition producing in womb and vagina a hypersecretion, a relaxation of mucous membrane. With all the causes, is it to be wondered at that the womb becomes diseased, even to such an extent that Dr. Hodge has remarked: "If the womb is subject to all these ills, what a pity it is that a woman has a womb." Now then, in pelvic pain, increase

of vascular congestion, augmentation of secretion, endometritis—for anything which produces a stasis of blood produces endometritis—in laceration of cervix with all its ills, cystic hypertrophy, uterine engorgement, arteries taking in more blood than can be returned by the veins. All these things call for some temporary relief, something to hold until nature, science and art can come to renew, to restore.

Now, what is the best influence we can bring to bear under such circumstances? Let us, as gynecologists, do as others do. The alienist restrains the maniac until time is afforded for other influences to work; it makes no difference whether he is restrained by camisole or chloral, the result is the same, he is prevented from doing himself harm. The femur fractured, we are told by Sayre, if treated in time by plaster splints there will be no swelling of the injured limb. Air pressure, Nature's splint, relieves the inflamed Eustachian tube, consequently the aurist blows out with a Politzer bag the occluding secretion to let in the air. The dry treatment in diseases of the ear, or what Spencer well terms "the mechanical treatment," is one that is based on pressure. The oculist holds the iris with atropia and daturia, and meets inflammation with astringents. The laryngoscopist uses astringents and caustics. The general practitioner places a bandage around the chest in pneumonia and puts the bowels in opium splints in peritonitis. Nature exerts a pressure which keeps the fundus of the womb at rest in health. She places the constrictor oris et cervicis muscle of Bucklin at the cervix uteri, and under this runs all the uterine vessels, lymphatics and nerves. Thus, there is placed a governor or regulator. The womb, similar to all machinery, needs a governor, or it will run wild. Rest, pressure and the use of absorbents mark well our line to meet local inflammatory diseases. Now, what means have we of putting the womb at rest, of producing contraction, of making pressure, of lessening the supply of blood, to break the sentence of

ubi irritatio as refers to uterine disorders, and of preventing the sequence of *ibi fluxus*, and, if it does occur, then preventing its doing any damage by pressing out the disturbing element, and so fixing the avenues that it cannot re-enter and grow by accretion? We need something to hold the circulation until we can repair the broken walls, until we can quiet the nervous system, until we can place the organ on such a high plane that neither intrinsic nor extrinsic causes can produce an effect upon the nervous system so as to cause congestion, so as to produce a gorged vascular condition, a congestion which means dilatation of the blood vessels. The power of producing the contraction of the circulation of an organ meets nowhere such an apt field as at the cervix of the womb, for here are all the entering and returning vessels of the uterus, and there is no power which will so conveniently and so well perform this requirement as heat. Heat is not a material substance, but a mode of action, a property of matter concerned in the sensations, which are made known to us and are communicable from one body or piece of matter to another. This heat must be applied at a temperature higher than that of the body, and yet not so high as to produce tissue damage. An average temperature of about 105° F., never higher than 120° F. This heat should be applied during a long period, and so frequently as not to allow the contractile power to cease in the interval. How does heat act? It is a stimulant, applied to the external surface it will excite the respiration and pulse, it will produce contractility; it is the best of the three methods we have of producing reflex contractility, and the contraction produced by it is the most permanent. Heat, to the cervix, produces not only local effect, but its action on the blood vessels which extend over the whole fundus; not only that, but it effects the whole pelvic viscera and the circulation of the general system. Heat is an alterative for the promotion of absorption of the redundant tissue in sub-involution and hyperplasia of the uterus. Emmet says: "Heat first relaxes the

capillaries, the tissues swell, then reflex action taking place the vessels contract and the tissues shrink," the nutrition is not interfered with—the re-action from heat, therefore, is contraction. In hemorrhages from the womb heat is the most reliable means of arrest; it acts, as a late writer expresses it, by throwing the muscular fibres of the uterus into tetanic spasms. How shall we apply heat? Sand-bags have been used, fuller's earth, hot and moulded, rubber bags filled with hot water; but water alone is the best medium; besides, the water, in addition to its thermic power, may have added to it such medicine in the way of iodine, bromides, salt or astringents as may be desired. The heat should be frequently, and for a time of some duration, applied; the injection should be promptly and efficiently used—the medicinal means should be applied with the latter part of the injection. Scanzoni made an advance in the right direction when he first recommended copious injections; the injections should have a steady pressure, and be given with some force. I am convinced that Emmet is right in stating that in addition to the heat the jet acts as a stimulus to excite the blood vessels to contract. While using the injection the patient should be in a recumbent position, with hips elevated, giving the benefit of gravity to the pelvic veins, and allowing the parts to be kept constantly covered over and surrounded by the hot water. The patient should be able to know by the thermometer, which shows far better than the uncertain sense of touch, the exact temperature of the injection fluid. Now, what fills best the purpose of thus applying hot water? The old bladder and pipe have long since passed into oblivion. There is nothing upon which the laity are less informed than that of a suitable syringe, and the manner of using an injection properly; the profession also neglect to properly instruct them—they merely order vaginal injections, and upon seeing the case again wonder why the means used have failed in relieving. The small piston syringe is a delusion for vaginal purposes; as well apply

water with a teaspoon in endeavoring to put out a large conflagration. The Davidson syringe, as applied under the directions as laid down by Dr. Emmet, is the best; the objection is the fatigue caused by its use. If you desire to develop what are called in secret society parlance the grip muscles, or if you desire to know how the President's hand feels after a public reception, try the use of this syringe by throwing up into the vagina one gallon of hot water three times a day. Next comes the irrigator, the syphon and fountain syringe; all these have their peculiar adaptation and their especial objections. Finding the difficulty in a Woman's Hospital to get just the syringe needed, and one by which, without too much labor, I could get the injection applied—being an advocate of long continued, thorough hot-water injections—I beg to call your attention to an apparatus which I have devised for use in hospital or in public or private bath rooms; the power is supplied by city reservoir or house tank. This fills, as far as possible, all the requirements of a fixed apparatus for a complete Vaginal Douche.

I have extensively used it during the past two years with the most gratifying results; much of whatever success I have had in uterine surgery I attribute to the complete preparatory treatment thus obtained, and the administration of vaginal injections has become to the patient a pleasure instead of an annoyance, a dread, as it was heretofore. The attendant is freed from the severe labor which many times, I am satisfied, she illy performed. The apparatus is placed against the wall of the bath room, and may be enclosed in a case. I use a light movable frame, which is placed over the bath tub; this has a proper inclination and is so arranged that the patient can, lying upon it, take the injections without incommoding herself or soiling her clothing. No uterine colic has occurred from its use.

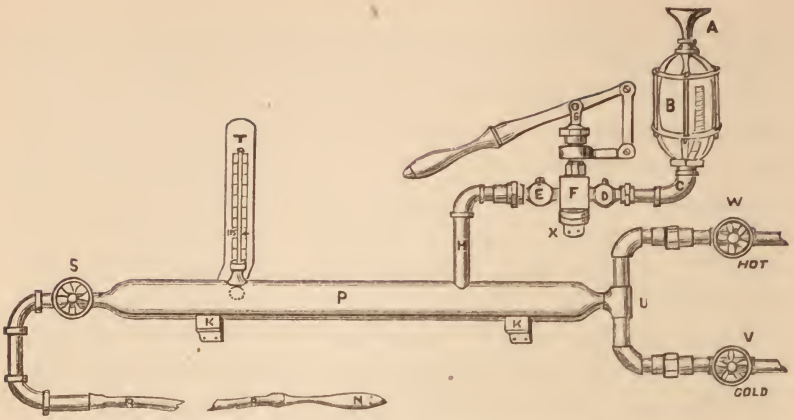

Fig. I.—Apparatus for Vaginal Douche.

A. Is the receptacle for the medicine. B. The glass vessel graduated to drachms and ounces for the liquid medicine—the glass is held by frame. C. Pipe connecting medicine holder with pump. D. Suction valve. E. Forcing valve. F. Pump. G. Piston of pump: each piston action throws the amount of liquid between valves D and E, into pipe H, and such equal amount between valves D and E from glass vessel B. H. Connecting pipe between forcing or ejecting valve and common pipe. K. Brackets holding main pipe P. N. Vaginal pipe. P. Main pipe where hot and cold water are united, and medicament is thrown in from pipe H. R. Rubber tubing fastened to pipe S, and to which vaginal pipe N is attached. S. Valve to shut off water from leaving main pipe P. T. Thermometer, with bulb in main pipe P. This indicates the temperature of water in main pipe. The arrow indicates the vaginal temperature in hot water injections. U. Union between main pipe with hot and cold water pipe. V. Cold water pipe with valve. W. Hot water pipe with valve. X. Bracket to support pump F.

Are injections of hot water ever injurious? There are cases of uterine colic, and some fatal cases have been reported. In all these cases there was either a lacerated condition of the cervix or a displacement, the majority being retroflexions; the colic gives the same symptoms (sudden pains, sickness, coldness of extremities) as are observed after catheterization of bladder or injections into the urethra. It is a question whether this shock is not caused by the entry of air. Olshausen, Depaul and Litzman have shown that there is such a thing as entry of air into the veins of the pregnant uterus, and Stofella showed that it

entered into a vaginal vein which had been eroded by carcinoma. But these cases are rare, and, as suggested by Ebell, it can be obviated by using vaginal tubes with only side openings. It is charged that injections of hot water light up afresh or rekindle an old pelvic inflammation.

Voisin states, that inflammatory collections in the neighborhood of the uterus are irritated through stretching of the vagina; but this is a pure matter of imagination, for, as Mundé says, no such instance was ever reported.

In conclusion, gentlemen, hot-water injections are not our only means, but as an adjuvant; abandon them not, their failure is your want of proper application. With all your using, use hot water injections.

ON THE ADMINISTRATION OF MEDICINES.

BY OTTO A. WALL, M. D., PH. G., *Professor of Materia Medica, Therapeutics and Pharmacy in the Missouri Medical College; Professor of Materia Medica and Botany in the St. Louis College of Pharmacy, Member of the Committee for the Revision of the U. S. Pharmacopœia, etc.*

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IT is generally known and admitted that, with the exception of a few local remedies, medicines must enter the circulation in order to exert their proper and peculiar effects upon the human body.

Various methods are employed to bring them into the circulation, such as hypodermic and endermic medication, inhalation, or introduction into the stomach, rectum or other cavities or channels of the body. Of these, the hypodermic method is the most direct, and, therefore, the most prompt and certain in cases of emergency; but it has many disadvantages, which limit its usefulness. The fact that the physician himself must administer each dose, restricts hypodermic medication to a very small number of

cases. Then, also, this method is not free from danger, nor is it of sufficiently general applicability. The medicine may require too large a dose for injection, or the medicines, or the menstrua in which they are dissolved, produce an irritating local effect, producing circumscribed abscesses, diffuse and extensive phlegmasiæ, or even erysipelas, endangering the life of the patient; or death may promptly result from the unfortunate injection of the medicine directly into a vein; or the effect may be slower, and clots formed in the veins are taken into the circulation, producing the disastrous effects of embolism.

The endermic method of medication, by removing the cuticle and applying the remedy to the denuded surface, has become almost obsolete since the introduction of the hypodermic method, and is seldom resorted to, except in chronic and obstinate neuralgias, sciaticas, and diseases of that character.

The endermic method by inunction is employed mainly for its local effect in skin diseases, although mercurial inunctions are made use of for constitutional effects.

The mercurial vapor bath might perhaps also be classed as a form of endermic medication.

The introduction of medicines into the rectum is seldom made use of, except for local effect, or when the patient is unable to swallow, as in strictures, ulcerations, cancer, or tuberculosis, involving the esophagus, pharynx, or larynx.

The introduction of remedies into other cavities or channels of the body is resorted to mainly for the local effect, as in washing out the bladder, syringing the vagina, urethra, or washing the thoracic cavity, ear or nose, or injecting various pathological cavities, as in abscesses, sinuses, and other similar cases.

Inhalation is practiced for its local effect on the mucous membranes of the nasal fossæ, pharynx, larynx, trachea, or bronchial tubes, although occasionally it is also employed for its constitutional effect, as, for instance, in the

case of the consumptives who resort to the *soffioni* in Tuscany for the purpose of inhaling the warm vapors charged with boric acid.

The smoking of stramonium leaves, etc., in asthma, may be considered to be a form of inhalation.

Insufflation differs but little from inhalation, except that the medicines are in powder instead of in the form of spray; and the blowing or dusting of iodoform upon wounds or into abscesses is similar to insufflation.

But for ordinary and daily use, the physician is compelled to rely mainly upon the old and approved method of administering medicines *per orem*, because the patient or the attendants can administer the doses, which can therefore be given in smaller quantities, more frequently repeated. We will now endeavor briefly to describe some of the advantages and disadvantages of this mode of medication.

When a medicine is swallowed and enters the stomach and intestines it comes into contact with the mucous membranes lining these organs, and it must pass through them before it can enter the blood. But immediately outside of this membrane lie the fine capillary vessels, whose walls enclose the ever moving current of blood, so that to reach the latter the medicine must also pass through the walls of these vessels. As these two membranes are in contact, they are to all intents and purposes only one membrane, through which our remedies may pass by a process of *absorption* or *osmosis*. It has been shown, however, by many and oft-repeated experiments, that no solid substances can pass in this manner, no matter how finely they may be powdered, so that all medicines must first be rendered fluid before absorption can take place.

As soon as a solid substance is taken into the stomach, a large quantity of an acid gastric juice is poured out, to the action of which the ingested substance is subjected. If it is of a mineral nature and soluble, either in water or in acid, it is dissolved in this secretion, which continues to be

poured out until a dilute solution is the result, which is then taken up partly in the stomach and partly in the intestines; but if the same substance is administered, already dissolved in plenty of water, no gastric juice needs to be secreted, and the absorption occurs at once in the stomach, commencing immediately upon ingestion. The effect will, therefore, be more prompt when we give a solution than when we give a powder of these mineral substances. But if the mineral substances are only soluble in an alkaline solution, they meet this in the intestine, and are there rendered fit for absorption. In this case, also, the previous solution in water or some other menstruum will hasten their passage through the stomach and their final absorption.

If we administer vegetable substances, they are acted upon precisely like mineral substances, and submitted to the same conditions previous to absorption. If they are soluble in water, and are given in solid form, gastric juice is poured out until they are dissolved and sufficiently diluted, so that they can be absorbed. But if crude vegetable substances are given, as, for instance, powdered cinchona, the action is less simple. The bulk of this powder consists of lignin, cellulose, sclerogen, etc., all of which substances are not soluble in water or dilute acid; and while the alkaloids contained in cinchona bark might be readily acted on by the acid juice with which they come in contact, this contact is hindered and delayed to a great extent by the insoluble cell-walls. Hence, the effect of our drug can be but slow and oftentimes imperfect. We must also bear in mind that the larger dose and insoluble form of such powders may produce objectionable effects by its mere physical irritation of the delicate and possibly inflamed mucous membranes. It is partly for this reason that the discovery and isolation of the alkaloids and the preparation of their soluble salts was so great an advance in pharmacy, and revolutionized the form of administering medicines.

No one can doubt the assertion that sulphate of quinine in solution will act quicker than its equivalent quantity of powdered cinchona bark, though there may be a difference in action, to which we shall presently refer.

There are still other substances of an oily nature, as castor oil, which require an alkaline solution to emulsify them, which they meet in the pancreatic juice and probably also the bile, by the aid of which they are transformed into a milky emulsion, which can enter the lacteals. Resins, oleo-resins, and balsams, are saponified by the same fluids, for resins, whether single or in combination with a volatile oil in oleo-resins, or in balsams with benzoic and cinnamic acids, are themselves but peculiar acids insoluble in water, but readily soluble in alcohol, or rendered soluble by alkaline solutions. Resins form the active principles of many of our drugs, as in podophyllum, jalap and copaiba, and among them we find some of our most valued blenorrhetics, diaphoretics, diuretics, and cathartics.

Many neutral principles similar in their nature to resins are also dissolved in a similar manner, and it is a matter of experience that if substances of a resinous or resinoid nature are administered in an alkaline fluid their action is increased and made more certain, and smaller doses will usually suffice. An acid, on the other hand, retards the action of a resinous substance, and this kind of drug, therefore, is not readily dissolved by the gastric juice, and even when it has left the stomach and entered the intestine the acid of the gastric juice must be neutralized by the alkaline secretions in the intestine before saponification or emulsification can be effected.

But there may be, and often are, conditions of the patients when no gastric juice will be secreted, and the medicine, if not given in solution, fails to meet with sufficient fluid to enable it to be absorbed. Under such circumstances solid substances may and do pass through the alimentary canal, and are voided with the stools without any or with only imperfect effect, and this condition is most apt to oc-

cur in those severe illnesses when the physician is most anxious to produce a prompt and full impression with his remedy.[1]

Or, instead of passing out of the system, these substances are retarded in the intestinal canal, and may accumulate there until the secretions are restored, when a large quantity being acted upon at once may produce the *cumulative effect* which often alarms and sometimes is fatal.

It is true that the above-mentioned is not the only cause of the *cumulative effect*, as this sometimes depends on a failure of the secreting organs to remove the remedy from the system in a proper manner, allowing it to accumulate to an excessive extent, until disagreeable symptoms result. But the above reason explains a not insignificant proportion of cases of *cumulative effect.*

It is, therefore, logical and reasonable to believe that fluid preparations of drugs and chemicals are more effectual than solid preparations of the same substances. The objections which have been stated against solid preparations are intensified by compressing the medicines, or working them into hard masses or pills, and by further providing them with coatings of various kinds, even more insoluble than the pills themselves.

Pills often fail to act when solutions act promptly. Besides, in the pill but the smallest possible surface is acted on at a time, and even if dissolved the action is slow, while the substance of the pill being in contact in a concentrated form with the mucous membrane, is apt to irritate this delicate structure, as, for instance, when we give salicylic acid in pill form, or when we give resinous cathartics in the same way. The latter are much more apt to produce griping than when given in alkaline solutions.

[1] An illustrative incident came to our knowledge recently. A physician was called to attend a case of congestive chills, and after a few days the patient died. The physician explained to the relatives that he was called too late, as the patient was already too weak to digest his pills. The administration of medicines in pill form in such a case can scarcely be considered less than criminal malpractice.

The liquid preparations, therefore, should as a rule be preferred to solid forms, and we next wish to inquire what class of liquid preparations are of most general use and applicability.

In the case of mineral substances, simple solution in water is often sufficient, but more frequently the efficiency of the remedy can be increased to a great extent by combination with tonics, which accelerate absorption, while aromatics and sugar render otherwise disagreeable substances quite acceptable to the taste.

Vegetable substances may be given in various liquid forms, of which sometimes one, sometimes another, offers special advantages.

Alkaloidal salts, which are very soluble, are often given with good effect in the form of powders, as, for instance, morphine, but preferably in solution with a little syrup and some water. But comparatively few drugs furnish isolated principles which can be given in this form. Besides, it is a mistake to suppose that the action of vegetable drugs depends on single isolated principles. The alkaloids themselves are generally almost insoluble in water, while their salts are more readily dissolved, and usually they exist in the drug, associated with extractive and other matters, which are capable of effecting their solution. Often the action of the drug depends upon a combination of principles, rather than upon any one, as is well illustrated in opium, with its many alkaloids and other constituents.

Fluid preparations, therefore, which contain all the active substances of a drug, rejecting only the insoluble or inert lignin, cellulose, starch, etc., will best represent the drug, and most completely exert its action.

Probably no one class of preparations is of more general use or represents the crude drugs better than the fluid extracts. In these preparations we have combined all the advantages and few of the disadvantages of administering medicines *per orem*. In using them, we give our medicines in the smallest possible bulk *to be readily absorbed*. The dose is

more easily remembered than that of tinctures, since a minim of the fluid extract equals a grain of the crude drug. The fluid extracts are prepared with appropriate menstrua, which thoroughly exhaust the drug. They are compact preparations for the medicine chest or saddle-bags, and by adding a little sugar and water as good a solution or mixture can be made at the house of the patient as in the office or the drug-store; and even if the fluid extracts produce a turbid mixture by the precipitation of resin, the latter is so finely subdivided that its particles are scarcely perceptible under the microscope, and present, therefore, the greatest possible surface for the action of the intestinal fluids.

The only objection that can be urged against the fluid extracts is, perhaps, that they possess in an intensified degree the often objectionable taste of the drugs. But this is not always an objection. Observing physicians have undoubtedly often noticed the beneficial effect of the *bitter taste* in increasing the appetite of their patients, as, for instance, in the use of quassia cups, where so little of the substance is dissolved as to amount almost to nothing, while it yet imparts the intensely bitter taste upon which mainly the action depends.

Medicines sometimes have adventitious valuable effects, which are produced by their influence upon the gustatory nerves or upon the imagination of a patient; and who would be willing to miss these effects if he can as well obtain them and derive good from them?

That effects may be produced by other impressions than those of the ingested substance upon the stomach or upon the system, after absorption, may be shown by the result which takes place when a person has eaten a bowl of delicious soup and finds a cockroach at the bottom of the bowl. The vomiting which results is caused by an impression received by the optic nerve, for if the cockroach had been found and removed by the cook, the soup, though the same, would have remained delicious. Besides, the cockroach

(*Blatta orientalis*), when given internally as medicine without the knowledge by the patient of its nature, is diuretic and not emetic.

That nausea should be produced by disagreeable taste or smell is perhaps not surprising, but it is more remarkable that the mere hearing mention of some disgusting thing will frequently produce vomiting by a train of impressions, the origin of which consists of the impinging of sound-waves on the tympanum.

That adventitious effects in medicines are often valuable no one can successfully deny, but they are lost to us when we employ the sugar or gelatine-coated pills, in which the taste is uniformly sweet or insipid.

It may not be out of place here to briefly notice a few erroneous impressions in regard to fluid extracts, which have obtained general credence among the profession. Some have objected to the alcohol which is contained in these preparations, but, we think, without sufficient cause. While the percentage of alcohol is quite high in some of the extracts, the doses are so small that the patient really takes an infinitesimal dose of alcohol. To show this, we will quote the doses of a few fluid extracts :

Fluid extract of			belladonna root,	-	Dose,	3–5	Drops.
"	"	"	conium fruit,	- -	"	1–3	"
"	"	"	digitalis,	- - -	"	1–2	"
"	"	"	squills,	- - -	"	3 or more	"
"	"	"	veratrum viride,	-	"	1–3	"

In fluid extracts of this kind, prepared from potent drugs, the action of the alcohol certainly may be disregarded. But there are others in which the doses are larger :

Fluid extract of			columbo,	- - - -	Dose,	fl℥j
"	"	"	cinchona,	- - - -	"	fl℥j
"	"	"	gentian,	- - - -	"	fl℥ss
"	"	"	rhatany,	- - - -	"	fl℥ss
"	"	"	senega,	- - - -	"	fl℥ss

In this class of fluid extracts the alcohol is given in

larger quantities, but the same symptoms that call for the drug also indicate the necessity of administering alcohol. The tonic effects of columbo, gentian or cinchona are not diminished, but augmented by the tonic doses of alcohol. Even admitting that in the largest doses of some of the fluid extracts, about fl℥ii, alcohol is not specially indicated, it is not present in large enough quantity to do any harm. The menstruum of only a few fluid extracts is pure or nearly pure alcohol. In most of them, and in all that are given in large doses, the menstruum contains only from 40 to 60 per cent of alcohol. The largest dose of any fluid extract, therefore, contains only about a fluid drachm of alcohol, or, in other words, the amount of alcohol is scarcely more than is contained in a dessert-spoonful of brandy.

There are two kinds of proximate principles in plants: starches, gums, extractive and coloring matters, pectin, etc., which are soluble in water; and alkaloids, resins, oleo-resins, volatile oils, etc., which are soluble in alcohol. Glucosides, which sometimes are the medicinally active constituents of drugs, are more soluble in alcohol than in water.

With few exceptions, the substances soluble in water are inert, and worthless as medicines, while at the same time they are extremely liable to undergo fermentation, so that preparations containing them are very apt to spoil, as is shown in infusions and preparations of that kind.

On the other hand, when a drug is exhausted by an alcoholic menstruum, the substances soluble in this liquid, which are almost without exception active and valuable ingredients of the drug, are all obtained in a form which will be permanent, because the alcohol itself prevents fermentation, and besides, the readily fermentable but inert substances have been left in the *marc* that remains in the percolators.

There is also a wide-spread belief that a fluid extract should always be thick and dark-colored. This is an erroneous idea, for the thick and viscid nature of a fluid

extract generally depends upon the presence of gum, pectin, etc., which are inert and tend to spoil the extract, while the color to a great extent depends upon inert coloring matters which are dissolved by watery menstrua, although, in a case like that of buchu, the chlorophyll is dissolved by a strong alcoholic menstruum, which is necessary to extract the volatile oil of the drug.

The consistence of fluid extracts varies from a viscid liquid, as in fluid extract of squills, to a very limpid liquid, as in the fluid extract of calabar bean, while the color varies from the pale-yellow of the latter extract to the deep-brown of fluid extracts of rhubarb, rhatany or sarsaparilla, so that lack of viscidity or color does not necessarily indicate an inferior extract, but in some cases shows the very opposite, because it indicates care in eliminating inert and useless substances.

ACUTE INFLAMMATION OF THE MIDDLE EAR, COMPLICATING THE EXANTHEMATOUS FEVERS.

By J. H. Thompson, M. D., Kansas City, Mo.

OF the importance of this subject I think none here can have any doubt. I am sure that I am not exaggerating when I affirm that 80 per cent. of all cases of partial deafness in children under fifteen years of age are dependent upon destructive inflammation of the middle ear, contracted during the course of exanthematous fevers. How often is scarlet fever given as the cause of a perforation of the drum membrane! And if we reflect for one moment, how often have we known patients to die during an attack of scarlatina, presenting symptoms of extensive nervous disturbance which we could not consider as dependent upon the fever, but could be easily traced to an inflammation of the

meninges of the brain, and especially those in apposition to the temporal bone. Undoubtedly there are many cases of great or total deafness following fevers which do not result from inflammations of the auditory apparatus *per se*, but follow inflammatory lesions at the base of the brain, and especially about the nucleus and inter-cranial portion of the auditory nerve.

Of such conditions I shall say nothing, for in very many cases we as surgeons can do absolutely nothing. It is different with extensive destruction of the drum membrane. Many are the cases where such lesions may be avoided if care be taken in an early diagnosis, and gentleness and skill be exercised in the treatment.

Acute inflammation of the middle ear is most dangerous in the early years of life, which can be attributed partly to the low vitality of some children, but more especially to the anatomical peculiarities of childhood. In the first place the middle ear is considerably nearer the pharynx in the child than in the adult, and the lumen of the Eustachian tube is greater in comparison with the development of the surrounding parts. In this tube the cartilage predominates over the bone in inverse proportion to the years of the individual, and consequently there is here proportionately a greater amount of sub-mucous connective tissue in early life, which aids considerably in the extension of an inflammation attacking the pharyngeal opening. The anatomical interest is centered more about the tympanic region and the roof of that cavity. In the skull of a child is easily found the so-called squamo-petrosal suture. This fissure is immediately over the external wall of the middle ear, and is very nearly on a plane with the drum membrane. This line of demarcation is very distinct until about the tenth year; and before that time, according to good authority, contains blood vessels coursing between the internal mucous membrane of the ear and the dura-mater. At birth the connection between these two sections of the temporal bone is quite loose.

In children the middle ear is considerably smaller than in the adult. The distance from the external wall or drum membrane to the promontorium is quite short. Of course we would expect to find the bony structure thin and delicate, and especially that plate-like shelf of the petrous bone, which on articulation with the squamous section forms the roof of the middle ear. Here the tendency to ossification is very slight, and often in the adult only a membrane separates the brain from the tympanic cavity. In children one would expect excessive frailness and delicacy of this part.

The growth of the mastoid bone is also of anatomical and physiological importance. In youth this mass of bone is slightly developed, and the same is true of its contents. At birth one or two small cavities in connection with the middle ear is all one finds answering to a description of mastoid cells, and the increase in number and extent of these cavities is slow. Mastoid disease in infants and children is comparatively rare, while, on the other hand, one finds it a very common accompaniment of aural inflammations in the adult.

Disease of the middle ear accompanying the exanthematous fevers may be caused by an inflammation advancing from the pharynx along the Eustachian tube, and finally attacking the lining membrane of the tympanic cavity. Or it may make its appearance in the ear itself, although at the time there be but little inflammation of the throat, and the tube remaining comparatively healthy. Examples of the first we most frequently find in scarlatina and measles. The second is often seen as the sequela of typhoid fever and small-pox.

Take a child, five years old, on the seventh day in the course of a scarlet fever. The throat is considerably inflamed; indeed, it is suffering from an acute purulent pharyngitis. I can use the term "purulent," for I believe that a line of demarcation between a severe acute catarrh of a mucous membrane, and a purulent inflammation of the same, does not clinically or histologically exist.

The disease has not only attacked the tonsils and the posterior wall of the pharynx, but extends upwards, and has perhaps included the structures about the posterior nares. Rosenmüller's fossa, shallow in the child, is completely obliterated by the inflamed and swollen mucosa. From an edematous infiltration the contractility of the levator and tensor palati muscles is considerably impaired. The enlarged tonsils pressing backwards, in connection with a swelling of the mucous membrane at the mouth of the tube, completely cuts of all communication between the pharynx and the middle ear. The inflammation at this time extends along the Eustachian tube to the bony canal itself; all along the mucous membrane is infiltrated, thickened and covered with a thick, tenacious muco-purulent secretion. The sub-mucous connective tissue becomes so edematous that the reduplications are increased in number and thickness. If such is the condition along the Eustachian canal, the slit-like opening is so closed that on inspection of the pharynx it would be difficult to find.

It is a well known fact that any irritant acting upon the sensitive nerves of the pharynx, especially those supplying the mucous membrane at the mouth of the tube, can cause a hyperemia of the middle ear through reflex irritation of the vaso-motor centers.

From this cause alone, and without any disease of the Eustachian tube, can the ear be considered a *locus resistentiæ minimæ*. Again, the closure of the tube is in itself a cause of congestion of the ear. Indeed, this congestion may be considered present the moment the ostium tubæ is shut for any length of time, as may happen from a swelling of the membrane or a collection of mucus.

Mucus in the tube will often do more harm than simply cutting off the passage. It frequently acts as a ball valve, and although it permits the air to come from the ear to the mouth, it effectually prevents it entering the ear again during the ordinary movements of the throat. If the nasal passages be closed, every act of deglutition will exhaust

the air in the pharynx, and consequently rarify the air in the middle ear. It is under these circumstances that we find the membrana tympani retracted and the internal parts congested. This congestion may not be well marked in the drum itself, but the reddened promontorium can be seen shining through. In such ears irritation at the external meatus more quickly congests the drum head; often on introducing the speculum we can see the blood vessels enlarged at the handle of the malleus. At this stage of irritation the ear is tender. A soreness will be detected on inserting a speculum, and the act of drawing out the concha will produce great pain. These are the conditions which one can understand as being favorable to inflammation.

Again let us return to our hypothetical case. Examination of the ear and the general condition of the child shows us that a stage of congestion is present, and as yet no inflammation has attacked the parts. I may add that of course a certain amount of deafness is to be expected. At some early hour the patient awakes from its sleep suffering excruciating pain, which it refers to the side of the head and ear. The pulse may be increased some 10 or 12 beats more than the fever would justify, while the temperature is one or two degrees higher than at the evening visit. If the ear be examined, the drum membrane is found of a scarlet color, and its connection with the walls of the meatus scarcely recognizable. The examination has been a painful one, and often the results, as far as the ocular inspection is concerned, are unsatisfactory. In this case we will admit that the temperature is elevated.

Usually the most that is done in such cases is to try and alleviate the pain. Drops of some anodyne are instilled into the ear, and often afterwards the case is left to nature. The pain generally lasts two or three days. Sometimes, however, within 24 hours we may expect a change; such relief will only come when the drum membrane is ruptured, and the pus finds an exit externally. As a rule the drops are continued, and the ear is forgotten in the anxiety attending

the treatment of the general fever. Such is commonly the course of an ordinary purulent otitis media complicating an exanthematous fever.

I have purposely in the above example said that there may be an elevation of the temperature, because there is a like disease coming on at the same period of the exanthem, presenting the same train of symptoms, but without an excess of fever, which does not come under the head of purulent inflammation. In the ear, as in mucous membranes generally, purulent and catarrhal inflammations are very nearly allied. It would be well, clinically, to consider this. The authorities, admitting the close relationship between catarrhal and purulent otitis media, have in some instances attempted to make fine distinctions and subdivisions of their disease, and have consequently caused considerable confusion in the nomenclature of aural lesions. In this respect I have quoted Politzer and Grüber, and think the clinical history of cases as they are presented to us justifies this opinion. An acute catarrh of the middle ear may present much the same train of symptoms, with the exception of a marked elevation of temperature, and a tendency to chronicity. It may depend upon the same primary causes, but may be immediately produced as an acute inflammation through other channels. Take a case of rubeola during the stage of hyperemia, of catarrh of the mucous membranes. There will not only be an inflammation of the pharynx and air passages, but there will be a marked conjunctivitis. As to the cause of this conjunctivitis writers differ. Some teach that the inflammation attacks the eye, because of a tendency of the poison to affect the conjunctiva, and that catarrhal conjunctivitis is a symptom of measles. Others hold that the eye is secondarily affected by the extension of an inflammation from the nose along the lachrymal ducts. A study of catarrh shows that as long as the disease be catarrhal there is a proneness for the inflammation to extend along the entire membrane, and that if it be excited into a purulent state it be-

comes localized. However, in measles catarrh of the throat does travel along the Eustachian tube, exciting in its course slight changes, and may thus attack the mucous membrane of the ear. The patient has for some time complained of a sense of uneasiness about the ear and side of the head. There is usually a slight tinnitus aurium, and gradually pain commences and becomes severe; it may be as severe as in the example first mentioned. On examination the drum membrane is found quite red and shining. The ear is tender, and any movement of the jaw or the act of deglutition will cause increased distress. Pain in the ear during the act of swallowing is not always indicative of an inflammation there. Warm water poured into the external meatus, or hot applications made to the side of the head, produces relief. Within 24 hours the tympanum has lost its marked redness, and at parts is bulged forward by what can be seen to be an exudation. The fluid causing the transparent yellow reflex may in a few days disappear, and leave the membrane in its proper place. Such is usually the course of an acute catarrhal otitis media complicating an exanthem. In the above example we have every reason to believe that the inflammation has extended from the throat, although that is not always the case. In measles, as in scarlatina, the ear is a *locus resistentiæ minimæ*, from reasons given of reflex vaso-motor disturbances.

A patient may be progressing favorably, when suddenly from some unknown cause the ear becomes inflamed. This usually follows careless exposure, or may be lighted up by one of those mysterious agencies which excite the pneumonia and pleuritis, sometimes complicating these fevers. It is true that in scarlatina the hyperemia of the skin may extend into the external meatus, and may partially involve the external surface of the drum membrane. But that it can excite acute inflammation of the deeper parts in this way is doubtful.

There is another class of cases observed in those who previous to their illness have been subjects of chronic aural

catarrh. An inflammation attacking an ear when there is a diseased condition of the drum, and especially partial atrophy of that membrane, will nearly always produce extensive necrosis.

With young persons, unless they complain of tinnitus aurium, it is not usual to detect chronic inflammation by the subjective symptoms. We are all given a hearing power much more acute than is necessary for the ordinary pursuits of life. A large part of this may be lost through disease and not cause sufficient deafness to be detected by observing persons. This is especially the case with children. Examine all children with chronic enlargement of the tonsils, and we will be astonished in many instances at the pathological condition of the drum membrane. It is in such cases that acute inflammations are particularly disastrous. It is in such children that, after we have diagnosed acute catarrh, we afterwards find the disease of a purulent character, and often dismiss our patients with extensive loss or total necrosis of the tympanum. Such destruction results from an accompanying myringitis, which is usually present, for it is rare that an acute inflammation limits itself to the inner tympanic surface. With a normal drum the membrane has sufficient resisting power to prevent necrosis; but if it be atrophic, we find it melting down like tinfoil in a flame.

It is not often that we see subjects of typhoid fever suffering from aural complications. The disease, in such cases, is usually purulent, and the cause is frequently unknown.

That a catarrhal affection has a great tendency to become purulent in low typhoidal states, one can appreciate. A catarrhal otitis may be developed, and may exist for days before it is detected, if there be coma. The attention which the patient gives to the side of the head is many times thought to indicate headache, or local meningitis. A catarrh may run its course, and neither the patient nor the physician have any knowledge of it. When, as usually is

the case, the disease becomes purulent, and the pus ruptures the drum membrane, the presence of matter at the external meatus, or on the pillow, is the first indication of an inflammation. With the flow of pus disappear the symptoms of meningitis.

Without inspection it is impossible to diagnose inflammations of the ear. Frequently is that organ treated for disease on account of a severe pain located there; when, in reality, an inflamed tonsil or a diseased tooth is the root of the evil. If such is the fact, under ordinary circumstances, how much the more should one exercise care in the exanthematous fevers! The irritation from a drop of the tincture of opium applied to the tympanum, with the surrounding membranes hyperemic, is sufficient to light up an inflammation of the neighboring parts. Indeed, the same can be said of every local treatment under such circumstances.

It is always desirable to know what is the character of the inflammation. Is it probably a catarrhal or a purulent inflammation? Is it a direct extension of an inflammation from the throat, or is it of local origin? We should know the exact condition of the pharynx; the changes about and within the Eustachian tube, if any; the parts of the middle ear most affected; and the condition, especially, of the drum membrane.

A diagnosis is presumptive with subjective symptoms; and only exact on objective ones. The subjective symptoms are pain localized in the ear, or referred to the side of the head, or extending along the sides of the neck. It is usually a dull throbbing pain, and at times becomes boring and lancinating. It is always increased by movements of the jaw, and the act of deglutition is unbearable.

In scarlet fever, with excessive throat complications, pressure under the angle of the jaw is of little value as a diagnostic symptom. An inflamed tonsil thus disturbed will cause pain which cannot be localized. Drawing the concha outward in health is disagreeable, in an irritation

of the middle ear or drum, distressing, but in acute inflammation very painful. Pain caused by pressure over the mastoid process, or on the temporal bone, is a symptom of aural inflammation. If the case be scarlatina, enlargement of the glands and swelling of the tissues about the side of the neck is of little value. In measles, however, enlargement of the glands around the mastoid bone and the angle of the jaw would indicate ear trouble. Swelling of the skin at the external meatus, unless caused by a furuncle is always a symptom of disease further in. It seems hardly necessary to state that deafness in any degree is strong presumptive evidence of disease.

To examine the middle ear and Eustachian tube, all that is necessary is a speculum, a hand mirror, and a Politzer air balloon, without the modern improvements. In these cases it is well to oil the speculum, secure a good sunlight, if possible, and, if necessary, resort to an anesthetic. In all cases of ear inflammation the drum membrane is red and swollen. Only a fissure sometimes shows the position of the long handle of the malleus.

If the mucous membrane only be inflamed, on close inspection the enlarged vessels can be seen running in all directions over the surface. If the myringitis be interstitial, the vessels are found coursing from the circumference toward the center. In the majority of cases the presence of a fluid at this stage cannot be determined. If there be great pain on touching the bony wall of the canal with a probe, there is at this point a localized periostitis, and the disease is in all probability purulent. The condition of the throat is a good indication as to the character of the secretion which the middle ear contains. If, on inspection of the pharynx, the mucous membrane be covered with a mucopurulent secretion and the disease be extensive, if there has been an increase of the temperature following a short rigor, the ear contains pus.

If the throat affection be mild; if the disease be measles; if there has been no exposure to cold; if there have been

no rigors, and the temperature is not higher than could be attributed to the general complaint, and if no remedies have been dropped into the ear, the disease is catarrhal. Of course a differential diagnosis will be more difficult the nearer the diseases approach each other in character.

It is too late at this time to be sure that the tympanum is not atrophied. The light spot is gone; the transparent areas in the membrane are masked by the products of inflammation, and the swelling of the tissues have obliterated those folds, which show that the drum is retracted.

To one exercised in aural examinations, the position of the handle of the malleus can be made out. If the fissure above mentioned approaches the perpendicular, in all probability the drum before the present attack was healthy.

The more this groove slants posteriorily, so much the more certainty there is of a previously retracted drum membrane. As soon as a fluid has filled the middle ear, it must point externally if the Eustachian tube be closed. The tympanum generally ruptures at its posterior segment. The younger the child is, the more apt we are to see the opening high up. The wound is commonly irregular and its edges ragged. Sometimes the secretions flow into the throat if the Eustachian tube be open, and frequently the whole is absorbed, leaving no traces. A catarrhal secretion may be either serous or mucoid; one clear and transparent, and the other opaque, thick and tenacious. These discharges, as they appear in the external auditory canal, are characteristic. If the parts about the drum membrane are bathed in pus, hiding a perforation, the ear should be cleansed with a gentle stream of warm water. Sometimes with the greatest care the perforation cannot be found. It is then necessary to inflate the middle ear and auscultate.

The dangers attending this inflammation are destruction of the drum membrane, necrosis and destruction of the os-

sicles, purulent inflammation of the mastoid cells, abscess of the cancellous structures of that bone, the extent and severity being in proportion to the age of the patient. Finally, meningitis and thrombosis of the lateral sinuses. The drum membrane is in danger of destruction in proportion to the severity of the disease. Purulent inflammation rarely leaves that membrane intact. Often do we see cases where, within twenty-four hours, the tympanum is totally destroyed, and where the first discharge of the secretion carries with it some of the small bones.

If the disease is of that virulent type, and if the membrane be extensively necrosed with an irregular, ragged-edged perforation, the prognosis is very bad. If the opening be small and round, with clean margins, and the membrane be in its usual plane, the probabilities are that as soon as the discharge ceases the parts will heal.

If, on examination of the well ear, we find signs of chronic atrophy, it is very probable that the diseased ear is in that condition, for chronic disease is rarely unilateral. Extensive necrosis, or total destruction, is to be feared. With catarrhal inflammation it is possible; with purulent, almost certain. Mastoid disease is always to be feared in patients over three or four years old, and the severity of the same will be in proportion to the extent of the aural trouble. The same may be said in regard to the meninges of the brain. No one can tell whether the tympanic roof be wanting or not, and the first indication of cerebral trouble is sometimes the first notice given of a lack of anatomical completeness. Brain symptoms are always serious. Coma, convulsions or paralysis are of fatal omen. In children, an edema of the skin behind the ear or over the temple is many times indicative of cerebral inflammation. All nervous disturbances, especially if such come on after a sudden decrease of the discharge, should warn us of probable fatal ending.

In introducing the question of treatment, the first suggestions are, to do as much as is reasonably possible to

protect a fever patient from this unfortunate complication. To do so necessitates daily attention to the auditory apparatus. We know that unless our thoughts are directed to the ears, we usually give but little notice to anything beyond the general fever and the throat.

With scarlatina, especially, I think we should be on our guard at all times, and never leave a patient without positive assurance that the ears are normal. Perhaps the best indication of an inflammation involving the mucous membrane of the Eustachian tube is a beginning deafness. The patient's hearing power should be tested at every visit, and the moment the slightest defect of hearing is detected, the throat and tympanum should be examined. If, on examining the drum, there is seen a band of blood vessels coursing along the side of the long handle of the malleus, all pure astringents, and especially the metallic ones applied to the throat, should be dispensed with. The chief object is to relieve all reflex excitability caused by the irritation of the pharynx, and to protect the external auditory canal from any sudden changes of temperature.

I would recommend for an application to the throat the following:

℞.—Ext. opii aq., - - - - - grs.v.
Acidi tannici, - - - - ℈i.
Glycerinæ, - - - - - ʒi.

M. S. To be applied 3 times daily with a cotton swab. It is astonishing to find how rapidly relief follows this application. This solution will have little effect if the glycerine be diluted with water or any tincture. Of course, with young children the amount of opium must be in accordance with the age. I believe that the pain is removed, not by the action of the opium alone, but by the lubrication of the parts by the glycerine. In the majority of such cases the mucous membrane of the throat is not only tender, but perhaps covered by a thick muco-purulent secretion, and it may be that the rubbing of the inflamed surfaces is the cause of the pain in deglutition. To protect the ear, one

could use a layer of cotton placed over the side of the head. If the drum is slightly retracted, it would be well to gently inflate the middle ear. This operation can be done at this time, but is rarely admissible in a condition of acute otitis. With children, an air bag should always be used, and with the greatest gentleness. If possible, one should inflate without the use of water; otherwise, if the throat be greatly inflamed, and the pharyngeal muscles partially paralyzed, the fluid may be forced into the larynx and trachea. I would say use an ordinary Politzer balloon, with a soft rubber nose piece. It is the best instrument. Children will cry as a rule at the sight of the apparatus and preparations. Then insert the tube into the nose and gently inflate. If the patient does not cry, and is old enough to obey instructions, let it pronounce the word "huck," then will the vault of the pharynx be closed and the ear inflated. One or two such inflations are sufficient. With babies and very young children, inflation is well done by the physician blowing from his own mouth through a rubber tube passed into the nose.

It would be well at all times to be careful of allowing the patient to swallow draughts of iced water. The contact of a very cold fluid with the throat may produce congestion of the middle ear. If cold water be given, let it be in spoonfuls. After all causes favoring congestion are removed, nothing more can be done as a prophylactic.

The treatment of the second stage of the disease can be divided into three parts. First, treatment during the period of active inflammation; secondly, treatment at the time of catarrhal and purulent effusion; and, finally, treatment after a rupture of the drum membrane.

As soon as an acute inflammation has developed in the ear, all active treatment of the throat should be stopped. Instead of the opium and tannin preparation, I would recommend that the parts be smeared with warm sweet oil. With the exception of this simple application, nothing can

be done, and our attention must be turned to the ear. The first thing is to relieve the pain. For this nothing is better than warm applications. It makes little difference whether they be made to the side of the head or to the external auditory canal. Leeches are also of great service. Indeed, one leech applied early will sometimes cut short the progress of the disease, and within a few moments relieve the pain. A warm fomentation can be well made in the following manner: Pour into the ear a spoonful of hot water; a little common salt dissolved in it is well. Let the canal be filled, and then close the fluid in with a wad of cotton. This should be done every ten minutes until the patient is relieved. It is particularly applicable with very young children. Hot dry poultices, made of heated bran or salt placed on the side of the head, are also very refreshing. A bag of steamed hops used as a pillow is one of the best remedies for continued pain in the ear. With older children and adults, we should always use leeches. A leech never draws more than a dram to a dram and a half of blood, and the loss of that amount will not affect the general condition of the weakest patient, certainly not as much so as the pain which it relieves. It is rarely necessary to use more than one at a time, and this should be applied to the inner surface of the tragus. A pellet of cotton will prevent the animal from taking hold of the skin further in, and a little patience exercised in directing the animal's head will be rewarded. Children almost in convulsions from pain will frequently go to sleep before the leech has half filled itself.

With older patients, if it is desirable to give morphine, it may be well done in the following simple manner: Take a thimble and fill it well with raw cotton; pour upon this about ten drops of strong ammonia; place the inverted cup on the clear skin over the mastoid process, and press it down for one or two minutes. The edge of the thimble will prevent the ammonia affecting the surrounding parts. When the cotton is lifted off, the epidermis will be found

shrunken, and on gentle rubbing with a towel will come off, leaving the true skin exposed. On this sprinkle a sufficient quantity of morphine, then cover it with a small piece of oiled silk, lint and adhesive plaster. Such an application of morphine will especially affect the ear. This simple operation was recommended by Trousseau for facial neuralgia. There is one more method one can use for the relief of pain. Fill the bowl of an ordinary clay pipe with cotton; pour upon this a few drops of chloroform; place the stem in the external ear, and with the mouth force the fumes against the drum. This is an excellent method, but I am afraid that in some cases it may produce too much irritation.

A little chloroform placed in the centre of a large wad of cotton, and bandaged over the ear, will sometimes be effective. If we find that warmth has no effect, or aggravates the pain, cold will sometimes act here as it does in the first stages of inflammation. Nothing more can be done until the disease reaches its second stage, and a fluid fills the middle ear. If we have reason to think the effusion is serous, we must try and force it out through the Eustachian tube. To do so, the air bag must be used. Let the head be so turned that the diseased ear is above. Then make two or three inflations. This will often cause the fluid to flow into the throat, and at times it will run down the nose and appear at the nostril. If this method fails, and there is danger of a rupture of the drum, it is well to perforate that membrane. An incised wound will heal by first intention. After the first collection of fluid has escaped, the mucous membrane relaxes, and the tube again becomes pervious. Any after-secretion will usually flow off or be absorbed. Frequently will a catarrhal inflammation of the ear recover without injury to the drum, unless that membrane be in a state of advanced atrophy. With a purulent secretion it is different. If we have reasons to believe that the ear contains pus, incising the drum is the best and surest treatment. Sometimes the edges of an incised wound will ne-

crose, but the perforation following will not be as extensive, all things being equal, as if the membrane be allowed to rupture.[1]

To aid the flow of pus, it is best to syringe the ear three times a day. It is well to remove all hot applications and poultices, as they are apt to cause the growth of granulations. Once or twice in the day the middle ear should be carefully and thoroughly inflated. If one is an expert with the Eustachian catheter, inflating the tympanic cavity by that method is a safe and sure treatment, especially if the disease be limited to one ear. With young children, when Politzerized, the inflamed ear, if the disease be unilateral, should always be above. In this way the sound ear is least affected by the inflation.

If the drum membrane be ruptured and the perforation be large, it is well to make an application of a five-grain solution of the nitrate of silver. This should be no stronger.[2] One dram should be poured into the ear, allowed to remain for one or two minutes, and then syringed out with pure water. The fluid will sometimes flow through the Eustachian tube and slightly irritate the pharynx. When it does, we may expect the most happy results.

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[1] Dr. Sexton has lately read a paper on the sulphide of calcium in the treatment of purulent inflammation of the middle ear and mastoid complications. He stated that he had had from that medicine the most happy results. The opinion of the society was not at all complimentary to the author of the paper, and, indeed, articles as they have appeared in the journals since show that the properties of that medicine in that respect are doubtful.

[2] It has become a prevailing fashion to drop into the middle ear astringents of different kinds and strength. Frequently, a saturated solution of the nitrate of silver is most freely and carelessly applied. Such treatment, I think, is dangerous. Not only do the resulting slough and coagula remain and excite continued irritation, but the hearing may be irretrievably damaged by an anchylosis of the stapes with the walls of the foramen ovale and a cicatricial hardening of the parts about the round window.

CAPSICUM A TYPE OF THE ORESTHETICS.

By J. R. L. Clarkson, M. D., Moberly, Mo.

[*Read before the Moberly District Medical Association.*]

I HAVE written on this subject because I believe our knowledge of pathology is already in advance of our knowledge of therapeutics.

The leading men in our profession, especially the Germans, write hundreds of pages on the microscopic anatomy of diseases, and only a few paragraphs on the treatment. I honor them for the light they have thrown on the nature of our maladies, and hope they may yet do as much for their relief.

After a physician has satisfied himself as to the diagnosis, he sometimes finds it difficult to determine what is best to do. And this difficulty is increased if the attack is violent and the disease is running its course rapidly. For if he adopts the wrong treatment, so much time may be lost as to cost the life of his patient.

Familiarity with the use of a remedy may almost be said to be essential to its proper administration. So much is this the case, that a very learned member of our profession says, that when he is called in consultation (if he can conscientiously), he always recommends some medicine which the attending physician is in the habit of using; for he knows that if he advises a remedy which the physician is not familiar with, if it is used at all, it will not be given in a way to produce its best effects. Especially is this familiarity necessary in the use of medicines capable of producing strong impressions or fatal effects, such as veratrum viride, nux vomica, aconite and many others.

How easy it is for a physician who is in the habit of using a particular medicine to know when his patient has a sufficient quantity, and also to know whether the symptoms which he sees are the effects of the medicine, or the

manifestations of the disease. As this, in a serious disorder, is of vital importance to the patient, ignorance of it is almost criminal in the physician. This knowledge is only to be acquired by close, careful, analytical study of the powers, operations and effects of the remedies used. This cannot be done well if a medicine is given in combination with other active remedies, but it must be given alone, and its effects carefully noted, otherwise its operations will be so modified or obscured as to afford but little, if any, useful information.

The nature and history of capsicum are too well known to require a description. Its active principle resides in capsicine, a semi-solid, possessing all the medicinal powers of the plant in a concentrated form.

The first disease that I will mention, for which capsicum is used, is a common cold, or catarrh of the Schneiderian, faucial or bronchial mucous membrane, or all of these together, as in influenza. It is used both locally and constitutionally, in the form of hot infusion, given *ad libitum*. In the wandering pains which women have in the pelvis, and more particularly in the uterus, I have found decided benefit and sometimes entire relief from a free use of a strong, hot infusion of capsicum. It is recommended as a cure for hemorrhoids and for chronic atonic uterine hemorrhage, given in either disease in two or three grain doses three or four times daily.

Recently it has been used with marked success in delirium tremens. In this disease it is given in very large doses, from twenty to eighty grains, either alone or in combination with other medicines. It has also been used with benefit in some forms of paralysis.

The above will show the scope and extent of the use of this remedy sufficiently for my purposes.

Capsicum is a type of a class of remedial agents which have been called by many different names, as stimulants, incitants, excitants, and, when used externally, epispastics, irritants, rubefaciants, vesicants, caustics, and escha-

rotics. Tully gives them the name of oresthetics. This name is derived from two Greek words, signifying to arouse, to stir up, to awaken, to excite susceptibility or sensibility. I use this term, as it is more comprehensive than any of the others.

Definition.

"Oresthetics are articles which, when taken internally, act primarily on the mucous membrane of the alimentary canal, and secondarily on all the other mucous membranes—in the first stage of their operation changing action in all these membranes, on the one hand obviating torpor and insusceptibility, on the other hand obviating morbid irritability and sensibility, and also irritative activity; relieving laxity and spongy turgescence; increasing deficient secretions, diminishing excessive ones, favorably changing vitiated ones; disposing apthous affections and ulcerations to heal, and 'destroying morbid germs, spores and bacteria:' if pushed, in the second stage, occasioning a preternatural degree of irritability and sensibility; in the third stage, kindling into action an inflammation of the erythematic sort; in the fourth stage, producing ulceration and suppuration; and, in the fifth stage, extinguishing vitality.

"The essence of their operation, when used internally, is to increase susceptibility when deficient, diminish it when excessive, and improve it when vitiated."

Oresthetics are used internally for the first degree of their effects, except when applied locally, when a stronger action may be beneficial.

When used externally, they produce the same effects on the skin that they do on the mucous membranes when given internally; but a higher grade of action is usually required, and almost every degree of their action may be necessary. When used externally they are generally called epispastics.

All articles possessing pungency to the taste are ores-

thetics. I will only mention capsicum annuum, piper nigrum, zingiber officinalis, caryophyllum, mentha piperita, mentha viridis, many of the essential oils, the mineral acids, petroleum, carbolic acid, creosote, terebinthina, cantharides, bromine, gum guaiacum, aqua ammonia and carbonate of ammonia. Several of the above, however, have other as well as oresthetic properties.

Although oresthetics act, primarily, on the mucous membranes and the skin, their action is not confined to these tissues; they act also on other parts of the animal economy, more especially, I think, on the nervous system.

About fifteen years ago, I had a number of cases of what I diagnosed to be local congestion of the spinal cord. The patients complained of general discomfort, weakness and indisposition to move about. There was slight numbness and tremor in the extremities. There was no fever and but little pain. I always found a tender spot in some part of the spine. I used calomel, quinine and other remedies internally, and epispastics externally, without favorable results. I then tried tr. cantharidis in efficient doses, and the cases recovered in so short a time that I felt justified in attributing the good results to its action. I used the same remedy in a case of partial paraplegia, and also, for a long time, in a case of hemiplegia, with benefit in both.

Many of the pure oresthetics are useful in odontalgia; indeed, they are the remedies on which we rely in this painful malady.

In hyperemia, spongy turgescence, congestion, and many of the phlogoses of the mucous membranes, such as conjunctivitis, catarrh, stomatitis, tonsillitis, bronchitis, cystitis, vaginitis and gonorrhea, we rely mainly on this class of remedies for relief and cure.

In typhoid fever, the free and judicious use of spiritus terebinthinæ is often of great benefit. I think I have sometimes cut the disease short by its use. Iodine and arsenic are also used in the first stages, with the view of

cutting it short. I have used them in a few cases only, but with benefit in all. In one, the good effects of iodine were very marked, after turpentine had failed to do any good. But iodine and arsenic both have other powers.

The use of the mineral acids in this and other diseases is so well known as only to require this allusion to them.

I am aware that opium is our main reliance in diarrhea and dysentery, both acute and chronic: but proper orestheticcs, given either alone or in combination, are often of great service.

We have many different articles belonging to this class, some of which are indispensable to the best treatment of affections of the bronchial mucous membrane. Balsam tolu, benzoin, capsicum, cantharides or petroleum are generally chosen.

Do orestheticcs ever produce true aphrodisiacal effects? By aphrodisiacs I mean those remedies which increase sexual appetite, and at the same time the power to gratify it.

When virility is impaired by intellectual pursuits, sedentary habits, or want of use of the procreative powers, and the general health is otherwise good, the judicious and persistent use of proper orestheticcs, I think, will be beneficial.

In such cases I have used the following prescription with advantage:

℞.	Tr. cantharidis - - - -	ʒi.
	Acid. phosphor. dil. - - -	
	Tr. ferri chl. - - - - -	āāʒij.
	Syr. limonis, q. s. ad. - - -	℥iv.

M. S. Teaspoonful four times a day.

When virility is impaired, or lost, by masturbation, or over indulgence in sexual intercourse, orestheticcs would do a positive injury, if used at first; but if the patient quits his bad practices, and is put on a course of tonics, with out-door exercise and cold baths, and avoids all dalliance

with women, lascivious conversation and lewd thoughts until his general health is restored, and his virility does not then return, I would advise the oresthetics mentioned above, or some oresthetic which has the (so-called) alterative power combined with it, iodine perhaps being the best.

Oresthetics are useful, if not indispensable, in hemorrhage, where it occurs in a part of the system to which they can be applied locally. Among the best of them for this purpose are carbolic acid, creosote, nitrate of silver and heat, hot water being the medium for the latter. They cause a constriction or closing of the open mouths of the bleeding vessels. Some styptics produce the same effect but by another power altogether. This is proven by the fact that creosote and other oresthetics possess no styptic properties whatever, and tannin and other styptics have no oresthetic power.

Scalds and burns are promptly benefitted by oresthetics. I think the peculiar constriction produced by the remedies causes the over-distended blood vessels to discharge their contents, and thus relieve the tension, which, at least in part, causes the pain.

The diseases of the skin usually treated by medicines of this class are too numerous to be mentioned in this paper.

The action of oresthetics is sometimes mistaken for the action of so-called stimulants. If there is a term in the medical vocabulary more vague and uncertain in its signification as generally used than any other, that term is stimulant. To illustrate: Calomel is said to stimulate the liver, although it is known to be antiphlogistic; spirits of nitre is said to stimulate the kidneys, yet its continued use is sure to cause more or less debility; tartar emetic is said to stimulate the stomach, yet it is one of the most exhausting remedies we have.

Adopting the definition that stimulants, so-called, "are medicines which produce a diffused, and, more or less, transient increase of vital energy and strength of action,

first in the sanguiferous and afterwards in all the other parts of the system," *pure* oresthetics are never stimulants, although this power is sometimes found in combination with the stimulant power.

I have reserved the mention of carbonate of ammonia and aqua ammonia until now, for the reason that I believe they are oftener used as stimulants than any other of the pure oresthetics. In the beginning of my practice, and by the advice of older physicians, I used them for this purpose myself, but was always disappointed. If we wish to produce an irritant or pure oresthetic effect, both of these articles are very efficient.

When some oresthetics are used injudiciously, or continued for too long a time, they produce a sense of weight and discomfort in the stomach, with partial loss of appetite. If the medicine is continued still further, these symptoms increase till the patient complains of a load in the stomach, even when it is empty, with anorexia, headache and general distress. When these symptoms appear, no good can come of the further use of the medicine. This is the reason, I think, that many of the tonic elixirs fail to do good after one or two bottles have been used, for they all contain one or more of the oresthetics. Those which produce these effects in the shortest time, according to my observation, are mentha piperita, cassia and caryophyllum. Some oresthetics do not seem to cause this trouble. I have used cantharides for months without a bad symptom. Piper nigrum, capsicum, mustard, and many others are used as condiments, with no bad effects.

The Southeast Missouri Medical Association will hold their next meeting at Farmington, Mo., Tuesday, Nov. 14th, 1882. It is hoped that there will be a large attendance of members; and a cordial invitation is extended to other physicians to attend the meeting.

G. W. Vinyard, M. D., *Rec. Sec'y*,
Longtown, Mo.

SUGGESTIONS ON THE MANAGEMENT OF LABOR WITH THE VIEW OF OBVIATING THE TENDENCY TO PUERPERAL PERITONITIS, METRITIS, PELVIC CELLULITIS, SEPTICEMIA, ETC., ETC.

By Edward Montgomery, M. D.

[*Read before the St. Louis Obstetrical and Gynecological Society, June, 1882.*]

In the practice of medicine, as in many other of the concerns of life, the motto, "Prevention is better than cure," is deserving of our sincere regard and consideration. By good natural sense, assiduous attention and practical experience, we can treat disease more successfully, and accomplish more good, than by the most erudite philosophy and transcendental metaphysics. I do not wish to be understood as ignoring scientific knowledge and investigation, but whilst courting all the knowledge to be obtained from physiology, pathology, chemistry, etc., and whilst taking advantage of the lights of science evolved by the thermometer, the test tube and the microscope, I would still greatly rely on practical experience, close attention, and a strict observance of the laws of nature, the course of disease and the effects of remedies.

As labor is a physiological process, in many cases active interference is not necessary.

But we may meet with a case where the pains are cutting, lancinating and frequent, the abdomen hard, tense and tender, the vagina hot, dry and unrelaxed, the patient very restless, feverish and irritable. In cases of this kind I am in the habit of administering the following mixture, I think with the most happy results:

℞.—Antim. et potass. tart. - - - gr. ij.
Ext. belladonnæ, - - - - gr. iij.
Magnes. sulph. - - - - ℥i.
Aquæ menthæ virid. - - - ℥viij.

M. S. A tablespoonful every two hours until bad symptoms are relieved. In addition to the internal medication, I advise warm hop and flaxseed meal poultices over the abdomen, and injections per rectum of "Castile soap-suds" and warm water.

In these cases where there is much feverishness and irritability, with a rigid os uteri, hot, dry and unrelaxed vagina, I have found the above treatment to be eminently successful.

In these cases, I would enter my most earnest protest against too much manipulation when the dilatation of the os uteri is slow. I do not approve the common practice of inserting the fingers between the os and cervix and the head of the child, to force dilatation, as that interference is fraught with danger; but the employment of the antiphlogistic soothing and relaxing mixture will accomplish our objects with safety and certainty. The frequent manipulations, the persistent efforts to expedite delivery by manual efforts, I consider reckless, dangerous, and entirely beyond the pale of rational and scientific practice. A resort to these means is emphatically meddlesome midwifery, and should be persistently avoided.

Another class of cases to which we are frequently called is principally characterized by uterine inertia. The patient is not irritable or feverish, the abdomen is not swelled, hard or tender, the vagina is not hot, dry or rigid, the os uteri is not rigid or undilated, yet the labor pains are slow and weak; but even in this condition I prefer the administration of strychnine and quinine, one twentieth of a grain of the former and five grains of the latter, with fifteen drops of aromatic sulphuric acid and three ounces of water, given every two hours for three or four consecutive doses. I have but little faith in ergot to assist and expedite delivery in uterine inertia, or where the pains are slow and weak; but I have great confidence in its happy effects in all cases of uterine hemorrhage. The strychnine and quinine, with friction and pressure over the abdomen, will in most

instances remove the uterine inertia and expedite delivery. Whilst opposed to what is justly styled "meddlesome midwifery," I am in favor of the prompt use of the forceps where the labor is too protracted. The long continued impaction of the fetal head in the pelvis, or the tedious pressure of the head on the perineum, is fraught with much danger to both mother and child.

On the expulsion of the child, some friction and firm continued pressure should be applied to the abdomen, so as to insure complete contraction of the uterus.

I think this part of the treatment is vitally important, for if the womb remains large and relaxed (subinvolution) there will be great danger of the absorption of putrescent matter by the veins and lymphatics. If the uterus does not contract, notwithstanding the employment of strychnine and quinine, and the frictions and pressure, the secale cornutum should be tried. Another very important remedy against the fever and inflammations following parturition is the washing out the vagina and uterine cavity with antiseptic injections, Condy's fluid, permanganate of potash, chloral hydrate, carbolic acid and glycerine, eucalyptol, Listerine, etc., etc.

Both to prevent and control post-partum fevers, inflammations and septicemic diseases, these antiseptic and antizymotic injections are the very best means we can employ; of course we should at the same time use internal medication. If inflammatory symptoms and fever run high, we should endeavor to subdue them by aconite, veratrum viride, quinine, opiates, etc., and freely apply turpentine stupes to the abdomen.

I have great faith in the efficacy of turpentine fomentations in all cases of puerperal fever and inflammations, and when there is swelling and tympanitis the internal administration of spirits of turpentine will be very serviceable. Made into an emulsion with gum, sugar and orange flower water, it is not very unpalatable or disagreeable.

In cases of post-partum fevers and inflammations, Lis-

terine, carbolic acid, the sulphites and salicylates are also indicated from their supposed antitoxemic properties.

In all cases the most favorable sanitary conditions should be secured; whilst the patient should be protected from cold currents of air, good ventilation should be provided, strict cleanliness should be maintained, and nutritious and digestible food provided; whether we consider these post-partum fevers and inflammations as cases of septicemia or specific fevers, in my opinion they are contagious, and therefore an accoucheur who has one case should not attend any accouchment until he is certain that by entire change of raiment, carbolized and Listerine baths, and the lapse of a considerable period of time, he is freed from all the poison and cannot communicate the disease. Whilst attending cases of scarlatina, measles, erysipelas, typhus or typhoid fever, diphtheria or malignant pustule, the physician should not attend to any case of labor.

By attending a case of accouchment whilst administering to cases of infectious and contagious diseases, the physician will be very apt to excite or give rise to some malignant form of malady in his patient.

To present my views in regard to the management of labor in a nut shell, I would say that the accoucheur should be patient, attentive, watchful and practical; he should endeavor to allay irritability, fever, and frequent lancinating pains. To attain these objects, antiphlogistics, aperient injections per rectum, emollient poultices, and turpentine embrocations to the abdomen, mild aperients such as the tartrate of potash and soda, tinct. of aconite or veratrum viride, opiates and quinine. To soothe the patient I have also much faith in bromide of potassium and chloral hydrate.

In uterine inertia give strychnine and quinine, and use friction and pressure over the abdomen. If practicable, apply the forceps when the labor is too tedious, too weak or too prolonged.

Endeavor to effect the delivery of the secundines entire,

within forty minutes after the birth of the child. Promote complete contraction of the uterus by friction, pressure and ergot of rye. If there are the slightest symptoms of post-partum inflammation, fever or septicemia, wash out the vagina and cavity of the uterus twice a day with some of the antiseptics, such as Listerine, carbolic acid and glycerine, eucalyptol, Condy's solution, permanganate, etc., etc. As internal remedies, give Listerine, quinine, opiates, and the sulphites. Apply the turpentine embrocations freely to the abdomen, and if there be much tympanitis or flatulency, give half a teaspoonful of the spirits of turpentine made into an emulsion with gum, sugar and mint water, every two hours.

Of course the best hygienic and sanitary conditions should be secured, and whilst the patient should be protected from draughts or currents of air, free ventilation should be supplied, and strict cleanliness should be enforced.

To support the strength and enable the patient to successfully resist the prostrating and malignant effects of the disease, easily digested and highly nutritive food should be administered.

KIDNEY AND LIVER CURE.—A correspondent of the *Druggists Circular* says of the following formula: This does not make "Warner's Safe Kidney and Liver Cure," but by a strange coincidence it is so much like that article that it would trouble Mr. Warner or anyone else to find the difference:

℞.	Liverwort - - -	℥j
	Powdered nitrate of potassa -	320 gr.
	Water q. s. - - -	
	Alcohol - - -	℥ij
	Glycerine - - -	℥jss.
	Essence of wintergreen - -	40 gtts.

Infuse the liverwort with one pint of hot water for two hours, strain or filter, dissolve the nitrate of potassa in the liquid, when cold add the alcohol, glycerine and essence of wintergreen, and make up the measure to one pint with water.

CASES FROM PRACTICE.

ABSCESS OF LUNG TWENTY YEARS AFTER GUN-SHOT WOUND.

By P. C. Yates, M. D., Neosho, Mo.

In March, 1882, I was called to Macon Co., Mo., to see Dr. W. V. Yates, my brother. Drs. J. H. Petty and Allin met me at his bedside. Dr. Yates is 42 years of age, of low stature, and of heavy build. We found him propped up in bed, gasping for breath, with a constant cough, expectorating a very fetid pus; extremities cyanosed, expression anxious, pulse weak and quick; in fact, the symptoms were those of immediate dissolution, and it was evident that what could be done must be done quickly.

The case has the following history: In March, 1862, while a soldier in the C. S. A., and engaged in the Elkhorn battle, he was shot—a minié-ball, weighing one and one-fourth ounces, passed directly through his left lung, carrying with it a gum button, with which the coat was fastened at the time. It entered between the fourth and fifth ribs (fracturing the ribs at the point of entrance), one inch to the right of the sternum, passed through the right lung, and came out at the articulation of the ninth and tenth ribs with the vertebra, tearing one of them loose from the vertebra, lodging just under the skin; and when taken out, the button, or a part of it, was in the hollow end of the ball. He was attended at this time by Dr. E. Poe Harris, now of Talequa, I. T., Dr. West, of Chariton Co., Mo., and myself; and for weeks he lay struggling between life and death, the air freely passing in and out of the wounds, both in front and back, and the discharge of pus was great.

After several months of severe suffering, he regained a moderate degree of health, but soon became afflicted with chronic dysentery, which lasted with more or less severity until the close of the war in 1865, and by spells for several years

afterwards. For some time prior to March, 1882, he had felt uncomfortable, and for three weeks had been confined to bed and rapidly growing worse, his attendants diagnosing pneumonia. One week before this, Dr. J. H. Petty was called in and discovered a large abscess on the posterior part of the right lung; there was no expectoration at this time. He was put on a supporting treatment, and everything done that could be done to relieve suffering. On my arrival we found, besides the symptoms mentioned above, an abscess about the posterior wound, extending across the posterior part of the right lung, some six inches in length and some four inches up and down the chest wall. In council, we concluded to open through the posterior chest wall immediately. Dr. Petty entered a large sized scalpel at the posterior cicatrix, and passed it between the ribs into the abscess. Dr. Y. desired not to take an anesthetic, saying the rapid breathing was sufficient, and as he showed no sign of flinching, saying that only the grating of the knife was disagreeable, he must have been correct. At first there was a great deal of spasmodic action of the muscles that hindered the free flow of pus. The stench from the pus was beyond any attempt at description; it was simply horrible. We gave that night, to secure rest, bromide of potash, chloral hydrate and sulphate of morphia, and gave quinine and whiskey to support him. By the next day the spasm of the muscles had all disappeared, and the flow of pus was free. We did not insert a drainage tube, nor wash out the cavity, nor attempt to use any disinfectants in the cavity, but used carbolic acid about the bed and dressings. In the first thirty-six hours it must have discharged a half gallon; frequently, when he would cough, the air would gush from the cut and carry the pus across the bed; after the first thirty-six hours the disagreeable smell grew less, the pus began to look more consistent, and the patient to show signs of rallying; the cough was less harassing, and we began to hope for recovery. The discharge now grew less day by day; the cough, too, grew less frequent, and in a few weeks almost ceased; he gained strength slowly, and by the first of June, 1882, he was able to resume the practice of medicine, his general health being apparently better than it had been for several years.

The points of interest in the case are the length of time after

the injury, 20 years, that the abscess formed, the rapid recovery of the patient from the extremely bad condition he was in with such an extensive abscess in so vital a part, without the use of antiseptics, or any attempt to wash out the cavity, and the extremely fetid pus passing up through the bronchial tubes, trachea and mouth, as well as over the fresh cut surface of the incision in the back, without producing any septicemic symptoms.

Dr. P. V. Schenck, whose valuable papers have made his name familiar to all our readers, having been elected lecturer on clinical gynecology in the Missouri Medical College, as successor to Dr. T. L. Papin, has resigned his office of surgeon-in-charge of the St. Louis Female Hospital, and will devote his attention hereafter to the practice of gynecology and obstetrics in this city. Office, 2732 Washington avenue.

Legally Qualified Practitioners in West Virginia include four hundred and ninety-four graduates of "reputable medical colleges," three hundred and seventy-five practitioners who had "been continuously engaged in the practice of medicine for more than ten years prior to the passage of the law," and one hundred and three who have passed examinations before the board.

Hasuer, the Oculist, of Prague, is said to be the most expert and rapid operator of the present day. May 16th is the day assigned to the patron saint of Bohemia. On this day the halt, the maimed and blind crowd into Prague from all the country around. On this day Hasuer is known to have operated for cataract on twenty-three eyes in one hour—the patients, of course, having been made ready previously, and the dressings being all left to assistants.—*Chic. Med. Jour. and Ex.*, Aug., '82.

EDITORIAL.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

For a number of years there has been apparent a desire on the part of the members of the American Medical Association to make the work of the association more available to the general profession, and to enlarge the membership and widen the influence of the association by changing in some way the old plan of publishing an annual volume of Transactions. This desire culminated in the appointment, at the meeting in 1881, of a committee to prepare a plan for the publication of a journal by the association in some such way as is the *British Medical Journal* by the British Medical Association.

At the meeting in St. Paul, last June, that committee reported a plan which provides for the journalizing of the proceedings, and their publication in a weekly medical journal to be called *The Journal of the American Medical Association*, provided the members of the association and the profession at large will give the undertaking the support necessary to secure its financial success.

A board of trustees was appointed, whose first duty it was made to issue a circular setting forth the plan of the journal, and soliciting pledges of support in case it shall finally be determined to establish the journal.

If a sufficient number of pledges are secured, the trustees will take measures to engage efficient editorial management, and arrange for the publication of the first number in July, 1883.

It is proposed that the journal shall contain thirty-two double-column pages of reading matter, at an annual subscription of $5.00 in advance. Members of the association will receive the journal without any charge except their annual dues to the association.

In order that the trustees may be able to act promptly in the matter, it is essential that those who receive their circular should answer promptly, with pledge of support.

A hearty response from the general profession will secure the establishment of such a journal as all will be proud of; and we are sure that the success of such an enterprise will in no way injure or interfere with the prosperity of other journals.

LOCAL MEDICATION IN PHTHISIS.

The recent discoveries of Koch, following those of Klebs and Schüller, have given a new ground for the advocacy of local medication in the treatment of phthisis.

Some months ago we had occasion to note in these pages the value attributed by a number of English practitioners of eminence to the more or less prolonged inhalation of antiseptic remedies in the treatment of phthisis.

Observations accumulate pointing to the infectious nature of phthisis pulmonalis, and establishing the value of direct local antiseptic treatment by means of inhalations.

While the atmosphere, laden with balsamic odors of the pine and other evergreen forests, has probably some value for the limited number who can avail themselves of opportunities for climatic change, the endeavor to secure efficient treatment by diffusing medicated and antiseptic vapors or fumes through the air of the apartments in which those dwell who are sufferring from phthisical disease has never been successful.

Neither has treatment by means of sprays been of service, farther than to relieve conditions affecting the upper respiratory passages.

The most satisfactory results have followed the adoption of continuous inhalation of antiseptic vapors by means of inhalers or respirators, so adapted to the face and nose of the patient that all the air inhaled during a more or less prolonged part of each day is thoroughly impregnated with some antiseptic vapor.

In a paper contributed to the August number of *The Practitioner,* Dr. G. Hunter Mackenzie advocates very earnestly this form of medication. He says that in ordinary cases he prefers a mixture of three parts of creosote and one of carbolic acid. He mentions the case of a child, aged seven years, who inhaled pure creosote almost continuously for several weeks without any difficulty or inconvenience, and who now continues well and hearty without treatment for over a year.

He notes some contra-indications to the employment of continuous medication, viz: laryngeal complications, hemorrhage, and great destruction of lung-tissue. In laryngeal phthisis, strong inhalations irritate the throat, and should either be omitted entirely or be reduced in strength by adding three or four parts of alcohol. He thinks that he has seen hemorrhage aggravated by the use of the oro-nasal respirator, so that he now makes it a point to have all bleeding arrested before commencing continuous inhalations. And when the lung-tissue has undergone extensive destruction, he thinks there is little use in attempting a treatment which must necessarily involve some annoyance and trouble. In cases that are suitable for treatment by continuous inhalation, he finds little need for other medication.

BOOK REVIEWS AND NOTICES.

Illustrations of Dissections in a Series of Original Colored Plates the Size of Life, Representing the Dissection of the Human Body. By Prof. Geo. Viner Ellis and Mr. Geo. H. Ford. (Reduced on a uniform scale and reproduced in fac-simile expressly for Wood's Library of Standard Medical Authors.) Second edition. Vols. I and II. *New York: Wm. Wood & Co.* (Wood's Library.)

It seems to us that it was an error of judgment to attempt to present this work in this form. The expense involved in the reproducing the colored plates in the reduced size was out of all proportion to the value of the result, which in our opinion is not great.

Lectures on Diseases of Children. A Handbook for Physicians and Students. By Dr. Edward Henock. *New York: Wm. Wood & Co.* (Wood's Library.)

This is a really valuable addition to the literature on diseases of children. It is a book which will be read with interest by every physician in general practice, for with the children is the chief part of his work, and everything that will help to a better understanding of their diseases and will aid to relieve their sufferings is of value and interest.

Dr. Henock has given us in this book, not a compilation from other authors, but the results of his own observations and experience, which have been prolonged and extensive. It is a thoroughly practical work and a credit to "Wood's Library."

The Psychology of the Salem Witchcraft Excitement of 1692 and its Practical Application to our own Time. By Geo. M. Beard, A.M., M.D., etc. *New York: G. P. Putnam's Sons.* 1882. 16mo.; square; pp. 112; cloth, $1.00.

This book is a comparison of the Salem witchcraft excitement of 1692 with the trials of Cadet Whitaker and Guiteau in our day. Whoever ventures to differ from Dr. Beard in regard to any matter of psychology must (in his opinion) be entirely wrong. We do not think that the time spent in reading this volume is very profitably employed.

A Manual of Obstetrics. By A. F. A. King, M. D., etc., etc., etc. With fifty-eight illustrations. *Philadelphia: Henry C. Leas, Son & Co.* 1882, 12mo.; pp. 325; cloth, $2.00.

Being disposed, generally, to look with little favor upon manuals, and epitomes of that ilk, we expected little of this book of Dr. King's; but, having read it carefully, we are forced to acknowledge that Prof. King has succeeded in producing an excellent work on obstetrics in small space. This work will not supersede the large and complete treatises of such writers as Lusk, Playfair, Leishman and Schroeder; but will be companions to these in a great many libraries of physicians.

For students just commencing to study this branch of medicine, we are inclined to believe that the use of this little volume by Dr. King will be a valuable preparation for the study of the larger works later in their course.

The account given of the development of the ovum is particularly to be commended for clearness and intelligibility. The same cannot be said for the description of the broad ligament. The distinction of an anterior and a posterior broad ligament is not warranted by usage, and does not improve the description or make the relation of the parts more easily comprehended.

We shall say nothing further in the way of criticism, except that there seems to be a touch of pedantry in the liberality with which Dr. King coins words to suit himself. Such words as "promontoric," "supra-infral," and "sphinctorial," seem to us even more objectional than that to which he refers himself in the preface, viz.: the substitution of "post partal" for "post partum."

A few such verbal emendations in a second edition will improve that which is now a most excellent work. The book deserves, and will have, a large sale, and a second edition will soon be needed. E. M. N.

Transactions of the Medical Society of West Virginia. 1881. 14th and 15th annual sessions—1882.

This volume of "transactions" contains several papers of considerable interest. We note that in this state, as in many others now, subjects relating to hygiene and state medicine are attracting the attention of the profession. The best papers in this volume are those dealing with subjects of this sort.

The papers read at the session in 1881 are meagre, and the committee did well to defer the publication until there should be more to publish.

The address of President Reeves is of considerable length, and touches upon a number of topics, among the most important of which are "Common errors of hygiene," "Disease in the well—in the cellar—in the dairy," "Importance of properly cooked food," "Weakness of country women," and "Disease in the school-room."

Dr. Camden's paper, "Public health, or sanitary science," contains an interesting review of some points in the progress of sanitary science during the last few years; and Dr. Frissell gives "A few thoughts and hints on hygiene and sanitary investigation." There are a number of other brief papers, some of which are of considerable interest, but to which we cannot refer in detail.

Clinical Lectures on Diseases of the Urinary Organs. By Sir Henry Thompson. Sixth London edition. Illustrated with 73 wood engravings. *Philadelphia: P. Blakiston, Son & Co.* Cloth, $1.25; paper, 75 cents.

Of this valuable work itself it is wholly unnecessary for us to do more than call the attention of the profession to the fact that Messrs. P. Blakiston, Son & Co. have placed it upon their list of publications of cheap standard medical publications. It is printed on good paper with clear, distinct type, and bound either in cloth or paper. This house have made arrangements with the authors of this and a number of other standard medical publications, by which a certain percentage of the sales is paid to the author, the only honorable way of republishing the works of European authors. We shall take pleasure in calling the attention of our readers to other works published in this way by this firm.

Illustrated Quarterly of Medicine and Surgery, July, 1882.

This journal contains seven articles. A case of duodenal ulcer, by Dr. F. W. Campbell, of Montreal, is illustrated by a full page lithograph; two cases of fistula of the urethra with the plastic operation successfully employed in treating them, by Dr. Chas McBurney, is illustrated with fourteen wood cuts; two cases of gummous iritis, by Dr. F. R. Sturgis, is accompanied by two lithographs, while a half-page lithograph is devoted to the illustration of Dr. J. O. Roe's report of a large

recurrent papilloma of the pharynx. Dr. Geo. R. Wheelock's case of diffuse congenital keratoma is illustrated by two half page artotypes. Six wood cuts illustrate Dr. Chamberlain's therapeutic uses of rubber tubing; while eight wood cuts accompany Dr. Roberts' paper on elastic extension in the treatment of Pott's disease.

The editors of the journal, Drs. Fox and Sturgis, are furnishing the profession with the most elegant specimens of journalism ever presented. The journal should be well supported.

Proceedings of the Seventh Annual Session of the Southern Ill. Medical Association, held at Carbondale, Ill., May 17 and 18, 1882.

This association has adopted the plan of publishing only the discussions, with brief abstracts of the papers, and allowing the members to publish their papers in medical journals where they please.

The discussions contained in this pamphlet would indicate that the spring meeting of the association was both interesting and profitable.

Essentials of Vaccination, A compilation of Facts relating to Vaccine Inoculation and its Influence in the Prevention of Small-Pox. By W. A. Hardaway, M. D., Prof. of Diseases of the Skin in the Post-Graduate Faculty of the Missouri Medical College, St. Louis, etc., etc. 16mo., pp. 146; cloth. *Chicago: Jansen, McClurg & Company.* 1882.

This little volume, prepared by our colleague, Dr. Hardaway, we read with interest in the proof sheets. It seems to us a much needed work, as our observation has forced us to the conviction that a great number of physicians through the country are lamentably ignorant in regard to the true essentials of successful vaccination, and are by no means sufficiently awake to the great importance of care and thoroughness in the performance of this operation.

In successive chapters, Dr. Hardaway discusses the History of Vaccination, Variola in Animals, Nature of Vaccinia, Vaccinia in the Human Subject, Abnormal Modifications and Complications of Vaccinia, Revaccination, Merits of Different Kinds of Vaccine Virus, Methods of Obtaining and Storing Virus, The Operation of Vaccinating, and Examination of the Objections to Vaccination.

We heartily commend the book to the attention of our readers.

Transactions of the Michigan State Medical Society for 1882. 8vo.; pp. 284.

This volume of transactions is a very creditable one. We notice that the action taken by the Michigan Society with reference to the publication of papers is almost identical with that of our own state association last year, allowing the members who read papers to publish them in any reputable medical journal, under the statement that it was read before the association and published by the consent of the society.

There are several papers of considerable interest, among which we note Dr. Christian's report of two cases of mal-presentation; Dr. Burr's, on the insanity of masturbation; Dr. Ward's résumé of antiseptics in the treatment of disease.

The Michigan Society is in an excellent financial condition, closing the year with several hundred dollars in the treasury. The members enrolled at the meeting numbered over two hundred and fifty.

BOOKS AND PAMPHLETS RECEIVED.

Essentials of Vaccination. By W. A. Hardaway, M. D. Chicago: Jansen, McClurg & Co. 1882.———The Malignity of Syphilis, with an Analysis of 450 cases of the disease. By L. Duncan Bulkley, A. M., M. D., etc. Reprint from the Transactions of the Med. Soc. of the State of New York. 8vo. pp. 27; paper.———The Disease of the Scythians (Morbus Feminarum) and Certain Analogous Conditions. By Wm. A. Hammond, M. D., etc. Reprint from *Am. Jour. of Neurology and Psychiatry*. 8vo.; pp. 17; paper.——— Medical College of Virginia. Forty-fifth session. 1882-3.———Treatment of Consumption, Indicated by the Discoveries of Koch and others of its Parasitic Origin. By M. L. James, M. D. Reprint from *Vir. Med. Mo.*, May, '82.———The Presence of the Micrococcus in the Blood of Malignant Measles: Its Importance in Treatment. By John M. Keating, M. D. Reprint from the *Phila. Med. Times*, Aug. 12, '82.———Proceedings of the Seventeenth Annual Session of the Southern Illinois Medical Association, held at Carbondale, May 17 and 18, 1882.———On the Nomenclature and Classification of Diseases of the Skin. L. Duncan Bulkley. Reprint from *Archives of Dermatology*.———Transactions of the Medical and Chirurgical Faculty of the State of Maryland. Eighty-fourth annual session, held at Baltimore, Md., April, 1882.———A Practical Treatise on Diseases of the Skin. By Louis A. Duhring, M. D. Third edition. Revised and enlarged. Philadelphia: J. B. Lippincott & Co. 1882.———The Change of Life in Health and Disease. By Edward John Tilt, M. D., etc. Fourth edition. Philadelphia: P. Blakiston, Son & Co. 1882.———On Laryngeal Asthma. By Wm. C. Glasgow, M. D., St. Louis, Mo. Reprint from *Archives of Laryngology*, July, 1882.———Cincinnati College of Medicine and Surgery, 1882-3. Forty-eighth annual session.

TRANSLATIONS.

CONVALLARIA MAIALIS (LILY OF THE VALLEY) IN CARDIAC DISEASE.

Prof. Lee gives the following résumé of his studies of the physiological and therapeutic action of this common plant:

1. The convallaria maïalis forms one of the most valuable cardiac remedies.

2. Under the form of an aqueous extract of the whole plant, administered in the dose of one gram to one and a half grams (grs. xv—xxij) per diem, it produces upon the heart, the vessels and the respiration constant and constantly favorable effects, namely, slowing of the pulsation of the heart, often with re-establishment of the normal rhythm; on the other hand, increase of energy of the heart, as well as of the arterial pressure, with regulating of the exaggerated arterial pulsations, and the sensations of *besoin de respirer* are less imperative, less painful.

3. The most powerful, constant and useful effect is the diuretic action, which it is most important of all to obtain in the treatment of cardiac dropsies.

4. The therapeutic indications may be summed up thus:

(*a*) The palpitations which result from a state of enfeeblement of the vagus nerves, or paralytic palpitations, which are much the most frequent;

(*b*) The simple irregularity of rhythm with or without hypertrophy of the heart, with or without lesions of the orifices or of the valves of the heart;

(*c*) The mitral constriction, especially when it is accompanied with a failure of compensation of contractile force of the left auricle and right ventricle; the contractile force notably increases, as sphygmographic tracings prove;

(*d*) In insufficiency of the mitral valve, the advantages exist especially when there are stases of blood in the lungs; when, consequently, the dyspnea appears under the influence of passive congestions, with or without nervous troubles of respiration;

(*e*) In Corrigan's disease, the favorable effects manifest themselves principally by the disappearance of the peripheric arterial pulsations, and by the facility with which respiration is established. When the left ventricle no longer presents compensative hypertrophy, the maïalis is specially indicated, which tends at a given moment to grow weak and even to dilate;

(*f*) In dilatations of the heart, with or without hypertrophy, with or without fatty degeneration, with or without sclerosis of the muscular tissue, the indications for the maïalis are clearly marked;

(*g*) Finally, in all affections indefinitely referred to the heart, when they have produced infiltration of the limbs, and, with far greater reason, a general dropsy, this remedy has an evident, prompt and sure action;

(*h*) In affections associated with dyspnea the effect is less.

5. The contra-indications are nul, for the medicament is applicable to all the affections of the heart. It is, moreover, without any unfavorable effect upon the cerebro-spinal system, as also upon the digestive organs. Further, it does not remain long in the system, has no cumulative effect or posthumous action.

6. For these various reasons the maïalis is superior to digitalis, the use of which we are often obliged to reject, or at least to limit, on account of the vomiting, digestive troubles, cerebral excitement, dilatation of the pupil, which it so often produces after a more or less prolonged use.

Digitalis ends at last by weakening the heart, by increasing the pulsations, by weakening them, in a word, by producing effects diametrically opposite to those which are sought.

7. To combat cardiac dyspnea, the maïalis is inferior to morphine, and especially to iodine; but morphine suppresses the urine; the preparations of iodine preserve intact their superiority, which I shall call respiratory. So the combination of maïalis with the iodide of potassium in the treatment of cardiac asthma constitutes a medication of the most value.

8. Finally, in cardiopathies with dropsies, the maïalis surpasses all other medication, without even being obliged to associate other diuretics with it, as milk.—*L' Union Méd.*, Aug. 8, 1882.

SPONTANEOUS FALL OF THE NAILS OF THE GREAT TOES IN A NON-ATAXIC PATIENT.

By A. Joffroy, Paris.

[Having recently published a case of spontaneous fall of the nails of the great toes in an ataxic patient, M. Joffroy now publishes a similar case in which the patient was not ataxic, thus showing that this symptom is not peculiar to ataxia.—Ed.]

The patient was a man of 44 years, who had enjoyed good health until 42 years of age, and who had never had sickness. At that time he had a great mental shock. He saw one of his children exposed to danger of death, and was so happy as to be able to save him, but immediately lost consciousness, had general convulsions for two or three hours, and then delirium for eight or ten hours.

After this attack, he felt pain in the left foot, and consequently difficulty in walking. But it was only a year later that there was produced a contraction of the left lower limb with *equinism* of the foot. At the same time, attacks more or less like the first, although less violent, were repeated at intervals of one or two months, and were more frequent in the latter part of the time.

In January, 1882, the following condition was observed: The left lower limb was in such a state of muscular tonicity that on palpation there was noted a greater consistency of the muscular masses of this than of the opposite side. When the patient walked, the limb contracted, and the equinism, which already existed in a state of repose, was exaggerated to such a degree that only the toes touch the ground; while the heel was at a distance of eight to nine centimeters (3 to 3½ inches). The patellar reflex was exaggerated on both sides, and by straightening the foot there was easily produced the epileptoid trembling, which is rapidly propagated to the opposite side. Sensibility was a little exaggerated on the left lower limb, and this exaggeration was easily found in the abdominal region of the same side. There was no trouble with bladder or rectum. There was, perhaps, a little atrophy of the muscles on the left hand (adductor of the thumb and the interossei).

There was loss of smell, considerable diminution of the taste,

marked weakening of the pharyngeal reflexes of the left side. Voice and deglutition normal. No disturbance of vision. Preservation of intellectual faculties, but emotional faculties exaggerated.

During the last fifteen or eighteen months, the nail of the great toes has become detached at three different times; the nail has reformed quite regularly. At the very time of our examination the nails of the great toes were in the process of renewal; in the posterior half (matrix of the nail), the nail presented a thickness and a position quite normal, while the anterior part was still constituted only of thin and irregular lamellæ, covering the subungual derma.—*L'Union Méd.*, Aug. 6, 1882.

GLYCERINE AND GLYCEROLES.

Translated and Abstracted from the French by Chas. M. G. Biart.

M. Pierre Vigier says that it must never be forgotten "that glycerine does not wet the skin, and opposes the absorption of medicines."

Seventeen years ago he related to the Société de Pharmacie, of Paris, the following experiments: 1st. He rubbed thoroughly into his skin, at different times, a solution of 10 grammes of potassium iodide in 30 grammes of glycerine, and never found any iodine in his urine. He found some, however, when using lard instead of glycerine. The application of these two mixtures acts also differently on the skin; whilst the one with glycerine is entirely innocuous, the other is very irritating, and its use can only be continued with great care. 2d. He rubbed well into his skin a solution of 1 gramme of chlorohydrate of morphine in 20 grammes of glycerine, and even kept next to the skin a piece of flannel saturated with this solution, without experiencing any narcotic effect. 3d. A solution of 1 gramme of atropia sulphate in 100 grammes of glycerine was applied to the temples during six hours, without dilating his pupils. These facts were not published in the medical journals. About the same time, M. Mayet, fils, read a thesis before the Ecole de Pharmacie, with conclusions identical with those of M. Vigier. Since that time, Pierre Vigier has made a still more striking experiment: He freely bathed a large

portion of his body with 5 grammes of corrosive sublimate in 100 grammes of glycerine. Notwithstanding the caustic nature of the bichloride of mercury, the skin was not irritated, and no mercury was present in the urine. Two of his pupils made the same experiments and obtained like results. He, consequently, considers this preparation an excellent parasiticide, preferring it to mercurial ointment, which stains badly, and allows the absorption of a large quantity of mercury. In consideration of the above facts, he concludes that, whenever the absorption of medicine through the skin is desired, a fatty substance is indispensable as excipient; but, when absorption is to be avoided, glycerine and the glycerites should be used.—*Gaz. Hebd.*, Aug. 11, 1882.

TREATMENT OF DIABETES MELLITUS AND GLYCOSURIA WITH POTASSIUM BROMIDE.

Translated from the French by Ch. M. G. Biart.

Dr. Felizeh, having occasion to administer potassium bromide to a diabetic affected with a well marked nervous disorder, found that, together with the subsidence of the nervous phenomena, the quantity of sugar in the urine also diminished considerably. He at once, following Claude Bernard's classical experiment, punctured the floor of the fourth ventricle in several animals, thus producing glycosuria. Later on he injected into their venous system a solution of potassium bromide, which caused the prompt disappearance of the sugar in the urine. Acting on these results he administered this drug more regularly to fifteen patients, who, having been carefully observed for six years, enabled him to testify to the great value of potassium bromide in diabetes mellitus and glycosuria. He also concludes that it is important in this disease to check the disorder of the organism producing sugar in excess, and to that end he particularly recommends persevering and regular muscular exercise. He thinks the substitution of other bromides for the potash salt itself possible, thus avoiding the inconveniences sometimes arising from the use of this drug.—*Gaz. Hebd.*, Aug. 11, 1882.

REPORTS ON PROGRESS.

MEDICINE.

Remedies for Rhus Poisoning.—R. L. Hinton has used with excellent results, in the treatment of poisoning by poison-ivy and poison-oak, a strong infusion of red sassafras root, to be applied by covering the inflamed surface with cloths wet with the infusion.

D. E. Smith recommends to cover the parts with bicarbonate of soda, in powder or saturated solution. After a few applications of this, he uses as a lotion zinc sulphate, ʒv, dissolved in a pint of water.—*Therap. Gazette*, Aug., '82.

Vaseline and Boracic Acid.—Dr. Lucas Championiére highly commends an antiseptic ointment composed of vaseline and boracic acid, which he usually prescribes in the following proportions:

℞.—Acid boracic - - - - -	6 parts
Vaseline - - - - - -	30 parts

M.

It is necessary that the acid should be finely pulverized and thoroughly incorporated with the vaseline. It should not be dissolved in alcohol or glycerine, as this would render the ointment irritating.

He finds this preparation very serviceable in superficial wounds, in eczema and mentrigo, for the erythema of the buttocks of the new-born. He has used it with satisfactory results in cases of feet having a foul-smelling sweat.

If it be desired to make an ointment of agreeable odor, different substances may be added. He often prescribes for infants the following:

℞.—Acid boracic - - - - -	ʒij
Vaseline - - - - - -	℥vijss
Balsam Peru - - - - -	grs. vij

M.

—*Jour. de Méd. et de Chir. Prat.*, Aug., '82.

Idiopathic Salivation in a Child.—Dr. Finlayson reports the case of a child six years old whose health since two years of age had been excellent, except that she had had measles and whooping cough some time before the date of the report. She was a bright, intelligent child, and had been in school for several months. At times of late she had had pains in the belly, sometimes of sufficient severity to make her cry, and lasting about half an hour; occasionally slight nausea and diarrhea. The mother attributed these symptoms to some error in diet.

From the beginning of February it was noticed that water came from her mouth, so that, on returning from school, her clothes in front were all wet, and soon she had to be taken from school on account of it. On admission to the hospital, on Nov. 25th, she was spitting every few minutes about a teaspoonful of saliva, amounting to 30 ounces in twenty-four hours, and, in addition to this, her clothes were quite wet in the morning when she was dressed. The fluid was thin saliva, but quite tenacious, sp. gr. 1003. There was no redness in the gums or cheeks, nor any unhealthy appearing patches anywhere, nor any swelling or tenderness of the glands, in the neck or cheeks, nor any affection of the ears. The fluid seemed to come chiefly from the sublingual glands. Treatment with the extract of belladonna, in doses commencing with one-quarter grain three times a day and increasing to three times that amount, effected a cure, and in a month she was discharged well.—*Glasg. Med. Jour.*, Aug., 1882.

SURGERY.

Syphilis in a Girl of Twelve Years.—Dr. Huntsinger reported at the last meeting of the So. Ill. Med. Association a case of syphilis in a girl twelve years old, which resulted from a bite on the nipple by a babe, which had inherited syphilis from its father. She nursed the babe at the barn one day to quiet it. The primary sore was found on the nipple of the little girl. Constitutional symptoms presented themselves, and yielded to the usual treatment.—*Proceedings of So. Ill. Med. Association.*

Fistula in Ano; Hemorrhoids; Ulcer of the Rectum.—The case was related by Dr. Metcalfe. About eighteen months ago a gentleman consulted him for painful defecation. The fear of pain had prevented him from yielding to the desire to go to the water-closet, and constipation with hemorrhoids had resulted. On examination under ether, a fissure of the anus was found. This was treated by forcible distension of the sphincter. Specular inspection showed a number of internal, bleeding hemorrhoids, besides a large, deep ulcer of the rectum, just above the internal sphincter. To this and to the piles pure nitric acid was applied by Dr. Ward, after Dr. Maury's method. There was also observed the external openings of two fistulæ, each having its outlet about three inches from the anus, one on the right and the other on the left side. A probe inserted passed up to the neighborhood of the ulcer. At the end of a fortnight the pain during and after stool was entirely relieved. A second application of nitric acid to the ulcer and hemorrhoids was made, and this effected a permanent cure, not only of those troubles, but also of the fistulæ, both of which were obliterated. The patient had been told by Dr. Metcalfe that the fistulous tracts would need to be opened by the knife before permanent cure could be looked for. The result obtained by curing the ulcer was as unexpected by the doctor as it was gratifying to the patient.—*N. Y. Med. Jour.*, August, 1882.

Incomplete Internal Anal Fistula in a Child Two Years of Age.—Dr. A. C. Post said that two or three days ago he was called to see a child, about two years of age, who for a year past had had some irritation about the rectum. It proved to be an incomplete internal fistula. He had never seen an example of anal fistula in so young a subject before.—*N. Y. Med. Journal,* August, 1882.

The Treatment of Intussusception.—Dr. W. R. Gillette, Physician to Bellevue Hospital, relates a case of intussusception in a child nine months old, relieved by injections of water, the administration of chloroform by inhalation, and manipulation of the tumor felt through the abdominal wall. This, he states, is the third case of intussusception in infants which he has

seen, and which he has been able to reduce by this means. He thinks that these cases, from the philosophy of their condition, and the necessary measures for relief, are best managed in the way indicated. In two other instances, in which he saw and advised this treatment, reduction was utterly impossible under the other methods tried. The children in each of these cases were held while struggling, and the injections forced into them against all voluntary and involuntary efforts which they could make. He deems the administration of chloroform almost absolutely necessary in these cases. The reason is not difficult to find, inasmuch as, while it gives us such perfect control of the patient, it also eliminates the element of muscular spasm. Moreover, massage is a powerful adjuvant to the hydrostatic pressure of water in these cases. In the first two cases the obstruction was not overcome until massage also was employed.—*N. Y. Med. Jour. and Obstet. Review,* September, 1882.

Resection of the Pylorus.—At the recent surgical congress at Berlin a discussion on this subject took place. It was reported that of eighteen patients operated on for cancer three still live. One, a girl, whose pylorus was removed by Rydigier for cicatricial stricture after ulcer, was exhibited to the congress in "blooming health," according to the report. Billroth regarded the operation in such cases as justifiable in opposition to Richter, who thought the time had not yet come for such measures. Langenbeck had in one case removed the pancreas with the adherent pylorus (result not stated, but easily imagined). Billroth expressed surprise that so many cases have already been operated upon. He thinks that not more than one case in fifty or sixty is fit for operation, because the diagnosis is made too late. He has himself made twenty exploratory incisions without operating—the exploration was fatal in one case.—Vienna Correspondent of *Chic. Med. Jour. and Ex.*, August, 1882.

Surgery and the Doctrine of Evolution.—C. Pitfield Mitchell makes an application of the Spencerian doctrine of evolution to some of the phenomena of reparative action, and reaches the general conclusion that "the molecular constitu-

tion of wounded tissues should fit them, on the average, for contact with a mean atmosphere, and certain moderate deviations from this mean." It is pointed out that, although traumatic injuries are not necessary accompaniments of life, they are of such frequency among the lower animals and man as to give validity to this conclusion. An absence of organized adjustments of function to the remaining forces commonly incident upon wounds is inferred from the inconstancy, diversity, and nature of these forces. Such deductions are shown to harmonize with experience, and certain principles of treatment for healthy wounds are presented as corollaries. The gist of them is, that, so far as the exigencies of practice will permit, wounds should be shielded from the incidence of any force to which we may know a priori there can not exist an organized adaptation. A normal atmosphere should be maintained, and cleanliness should be absolute at every step. Believing that the plasma exuding from the severed tissues is, by "its chemical and mechanical properties, and contact with environing forces during evolutionary time, specially fitted to protect the less stable cells which lie underneath," much importance is attached to the preservation of its integrity. "Wounds should remain open until the surfaces have become glazed, and all interfering applications should be scrupulously withheld." Finally, a verification for these inferences is found in the facts disclosed by Dr. McVail, in his paper in the "British Medical Journal" for July 23, 1882, on the results of "Ten Years' Surgery in Kilmarnock Infirmary." The method of dressing employed (dry-dressing) essentially fulfilled the above-mentioned theoretical requirements, and gave, on comparative analysis, the "best general results covering a lengthened period of time that have ever been recorded in the history of British hospital surgery;" and the last group of cases reported—numbering 421, including 90 operations, 23 major amputations, 45 injuries, 52 abscesses, and 7 compound fractures—showed not a single fatality from any cause.—*N. Y. Med. Jour. and Obstet. Review*, September, 1882.

Ascitic or Ovarian ?—Dr. Foulis showed, at the meeting of the Medico-Chirurgical Society of Edinburgh, a bottle containing some ascitic fluid from the abdomen of a lady with malig-

nant tumor of the ovary. He called attention to a flocculent deposit in the fluid. He stated that, though ascitic fluid may be quite free from deposit when first drawn off from the abdomen, yet, generally, within forty-eight hours a flocculent deposit appears. This deposit, when examined under the microscope, always consisted of extremely fine, glistening fibrillæ, sometimes running parallel to each other, but more often interlacing, like the fibers of a piece of felt. Such a deposit he had never seen in a simple ovarian fluid. His explanation is that *ovarian* fluid is a *secretion* poured out by the cells lining ovarian cysts, but *ascitic* fluid is an exudation from the blood, and contains more or less fibrin according to the amount of inflammatory action present.—*Edinb. Med. Journal*, August, 1882.

OBSTETRICS AND GYNECOLOGY.

Graviditas Serotina et Præcox.—Peter Young reports three cases of prolonged gestation lasting, respectively, 334, 311 and 306 days between the disappearance of the menses and the occurrence of parturition. He also reports three cases in which the periods between the disappearance of the menses and parturition were, respectively, 254, 260 and 264 days.—*Edinb. Med. Journal,* August, 1882.

Catarrh of the Cervix and Cervical Lacerations.—Schroeder maintains that cervical catarrh, which is often found associated with lacerations of the cervix, instead of being dependent upon the laceration is often the cause of the laceration. During child-birth lacerations of the cervix occur constantly, but heal without any special care or treatment when the torn surfaces lie in apposition, as they do when the tissues are in a normal condition. But when the mucous membrane is thickened from chronic catarrhal inflammation, it rolls outward and prevents the wound surfaces of lateral lacerations from being held in apposition. Hence the normal cervical tissue is not developed here and the laceration persists, not causing the catarrh, but really resulting from it. He recommends in these cases the radical cure of the catarrh by excision of the cervical mucous membrane. Closure of the laceration may be accom-

plished in the same operation. He excises the diseased mucous membrane, covering the denuded surface with healthy tissue from the vaginal surface of the cervix and then closing the laceration, and has been much pleased with the result of the combined operation.—*Am. Jour. of Obstet.*, July, 1882.

Dysmenorrhea from Hyperesthetic Hymen. — Dr. Robert Watts reports the case of a lady 19 years old, who, since the commencement of menstruation at 12 years of age, had always been regular in her periods, but had always suffered a great deal of pain in pelvis and back. There was also headache and gastric disturbance. These symptons lasted several days, the flow continuing seven to nine days. A Chicago physician, who had examined her, had told her that she was malformed—that she was "not a natural woman." Dr. Watts, on attempting to make a vaginal examination, found the parts exquisitely sensitive, and was unable to introduce his finger. Closer examination revealed a very close hymen, which was somewhat elastic, yielding to pressure by the finger, though this caused severe pain.

In its center there was an opening large enough to admit an ordinary uterine probe. The hymen was cut and nothing abnormal was found about the uterus. Ten days later she menstruated without any pain or headache, or any of the unpleasant symptoms which had previously always attended menstruation, nor have they since recurred. Her general improvement in health is very remarkable.—*N. Y. Med. Jour. and Obstet. Review,* August, 1882.

Head and Buttock Presentation.—E. P. Christian reports a case which he saw in consultation, in which the attending physician had been with the patient all day. The woman had expressed the opinion for some weeks that the child did not lie right. (Her first child had presented with the shoulder and had been removed by version.) Though the pains had been regular and constant all day, it was not until evening that the child was low enough, and the os sufficiently dilated, to allow an accurate diagnosis of the presentation. A head presentation was then made out. Later, the os having become sufficiently dilated, the labor advancing slowly, and the woman becoming

greatly exhausted, the doctor applied the forceps. This was done readily, but they invariably slipped as soon as traction was made. Dr. Christian was then called in consultation, and arrived about 5 A. M. He found the head high in the pelvis, and what seemed to be a very large caput succedaneum. His endeavor to apply the forceps resulted just as had those previously made. Removing the blades and introducing the hand, to determine the source of the difficulty, he came to the conclusion that the soft mass, which had first been supposed to be a caput succedaneum, was in reality the buttock of the child, which was doubled together, so that the two ends thus presented together. Accordingly he passed his hand on into the uterus, turned and delivered, applying the forceps to the after-coming head, as there was some delay at that stage. The child was dead. The mother died on the third or fourth day, never having rallied from the depressed condition.—*Trans. Mich. State Med. Soc.*, 1882.

Treatment of Pelvic Cellulitis.—Dr. Pallen suggested the idea of carrying out here the principle, so generally and properly taught in surgery, that the best way to produce absorption is by compression. For decreasing vascular engorgements of the pelvic organs no laxatives are better than cream of tartar and sulphur, or Hunyadi János water. For the employment of compression, the instrument consists of a double water bag made of rubber, to rest over and below the iliac fossa on either side, and admitting of the use of a greater or less amount of hot-water pressure, according as the case may indicate. The pressure is equable, and causes the least possible amount of pain in this very sensitive condition. Counter-pressure can be made from within and below by the introduction of soft clay into the vagina with the patient in the genu-pectoral posture.

He allows the clay to remain in place usually about two days, and then removes it and introduces a fresh portion, more for the satisfaction of the patient, who imagines the clay becomes dirty, than because of any special indication. He had treated seven cases by this method, and the result in two had been very satisfactory. Of the other patients, two did not carry out the directions, two were still under observation, and

one had been only five days under the remedies. He had often treated cases of gonorrheal elytritis by the introduction of soft clay, which perfectly molded itself to the varying form of the canal with the change in position of the patient, which was of the greatest possible advantage. Before its introduction he applied nitrate of silver, either in a saturated solution or in the form of the solid stick, to the inflamed mucous membrane, washing the whole surface at once with a solution of sodium chloride, renewing it every twenty-four or forty-eight hours. This was an excellent means of preventing the extension of gonorrheal inflammation up into the uterus, and usually cut the disease short.

Dr. T. A. Emmet remarked that he had made use of fuller's earth for many years in the treatment of vaginitis, mixing it with glycerine, and had found it an excellent remedy, if not retained too long, but after becoming dry it was exceedingly irritating, and difficult to remove. Some one in Paris, whose name he could not recall, treated some uterine disease by packing the vagina with a stiff flaxseed poultice. It had occurred to him that this might be a far better material, as it would not become hardened like clay. He had found a great want of tolerance of such measures in acute pelvic cellulitis, and while, theoretically, equable pressure should promote absorption, the patient would hardly endure the introduction into the vagina of a moderate amount of cotton saturated with glycerine. It had been asserted that even distension from the use of the water in a vaginal injection would increase the inflammation. But this was a contingency he believed could never occur so long as the water could escape from the vagina.

Dr. Pallen remarked that he believed it was in the few cases where the cellulitis occurred in front of the uterus that there was such a want of tolerance to manipulation and pressure; but that where it occurred posteriorly, as it usually did, tolerance was much greater, especially after the patient had been taught to assume the knee-chest posture, when clay could be introduced, and afforded positive relief. His experience with this method, however, had been limited.—Report of N. Y. Obst. Soc. in *N. Y. Med. Jour. and Obstet. Review,* August, '82.

SOCIETY PROCEEDINGS.

ST. LOUIS OBSTETRICAL AND GYNECOLOGICAL SOCIETY.

May 25th, 1882—Dr. Maughs, President, in the Chair.

Extirpation of the Uterus.

Dr. Moses read a paper entitled "Extirpation of the Uterus." (Vid. p. 218.)

Dr. Gregory.—So far as I am concerned, I will say that I don't think there is any question that there are cases that demand surgical operation, where the operation is beneficial; just as with the operation of laparotomy for obstruction of the intestines. I know there are many cases where this operation would save the life of the patient, but it is difficult to determine the class; the difficulty lies in the diagnosis. I think that it would be warrantable to remove the uterus, when we can encompass the entire diseased part. I would not recommend the removal of a cancerous tumor from any place, wheresoever it might be, unless I felt sure of being able to remove it all; and if I had a cancer involving an internal part or organ, and this internal organ was one that experience teaches us could be removed, and yet life be preserved, I don't see why this internal organ should not be removed, if we have reason to believe that the disease will not recur. That is the only difficulty. Dr. Moses saw with me last week a case of malignant tumor of the neck; the tumor was on one side of the neck and extended under the clavicle, and went back as far as the front of the tracheal wall. I said to this man: "I can remove all of the tumor that is in sight. I can go under the clavicle and remove some of that portion, but I can't go behind the carotid artery. I can't promise you that I will remove all this tumor; I can remove all that is in sight, but I can't promise you that I can remove the entire disease, because a

portion of it is out of sight and beyond the reach of my fingers—I can't tell how far it goes under the clavicle. I can percuss the apex of the lungs, and find they are perfectly resonant. I can put my ear upon the apex of the lung, and can find that it has not extended so far. I am not anxious to undertake the removal of your disease, but am willing to undertake it if you are willing to take all the risks." I feel in this matter as I do in cases of obstructed intestine. Drs. Moses, junior and senior, saw a case of obstructed intestines in which the obstruction had existed for three weeks, where I was called upon to operate and declined, and the patient got well. I have been called to people under such circumstances and declined to operate on several other occasions that I can mention, and the patients have recovered; and I have been present at a number of cases of laparotomy where the patient died after the operation. I can mention a number of cases of obstructed intestines where the patients got well, that were not operated upon; and I have no doubt that there are a good many cases of obstructed intestine that have not been operated upon where the patients have died. The great difficulty is to determine when it is advisable to operate. In these cases when I have made up my mind that it is best to operate I make the attempt, with the understanding on the part of the patient that I may fail to remove all the disease. If I could know beforehand that it was impossible to remove it all, I would not operate, but there must necessarily be some cases in which there is doubt as to whether it is possible to remove all of the cancerous disease involving an organ. I think it is the bounden duty of the surgeon, if he attempts the removal of an organ, to remove all the disease as far as is consistent with the life of the individual. I recollect some years ago that we had a visitor at this society, and this subject was discussed. Dr. Brickell, from New Orleans, who was then visiting this society, said that he considered this operation justifiable, and he advocated it as strongly as any surgeon now advocates it. I do not think a surgeon should hesitate to remove a cancerous uterus if he thinks he can remove the entire disease.

Dr. Engelmann.—I think Dr. Gregory has struck the key note of this operation—it is the difficulty of diagnosis. I take

a good deal of interest in it. I have attempted it several times, and have performed it several times on the cadaver. I wrote a paper upon that very subject, and pointed out particularly the extreme difficulty of diagnosis in these cases of cancer of the uterine body. There are two points of difficulty in the diagnosis of uterine cancer; first, the diagnosis of cancer, primary cancer of the uterine body; and second, the diagnosis of it early enough for an operation. I have seen several of those cases. Two cases came to me recently, both in the course of a month. The first case was that of a lady who had been under the care of a clever physician, who stated that he had been unable to make a diagnosis. At last he took his forceps and broke off a little piece of the polypus, which he found to be cancerous. There was no odor to the discharge, and there had been no discharge until shortly before I saw her. There was very little bleeding, and there were slight pains, which the patient took to be rheumatic in character, which continued a short time. There was no other evidence of cancer. During the operation, at which Dr. Papin was present, we found that there was beginning an infiltration of the broad ligament. That was enough—we couldn't remove the cancerous infiltration, so the abdomen was closed, and the patient got over the effect of the operation very quickly. In the other case there were better evidences of cancer, but no evidence of its spreading beyond the uterus; and there was no evidence of any adhesions whatever. The uterus was freely movable. When we made the abdominal incision we found the intestines, the omentum and the bladder adherent to the cancerous uterus, and very likely infiltration just beginning; so the operation was stopped, the abdomen closed up, and the patient got well from that operation in a very brief period of time. In both these cases, after a very careful examination, we had concluded that they were cases for operation. Those are accidents which no one can discover. Adhesions to the bladder, omentum or intestines, and infiltration of those parts, can not be discovered externally in every case.

Then in regard to the operation itself. I have made an operation upon the cadaver by the vaginal method. It is a very difficult operation—very difficult, indeed, upon the cadaver even; but it certainly gives beautiful results when done strictly ac-

cording to Freund's method. It appears to me that in operating by the vaginal method we are at a disadvantage. Suppose in this last case I had attempted to remove the uterus by the vaginal method, and had attempted to drag the uterus down! But it seems to me that the great difficulty is in the diagnosis. I have no doubt that in a great many patients who die from a supposed recurrence of the disease there was incipient infiltration about the surrounding parts. The reason why we have so little experience, it seems to me, in these cases is because primary cancer of the uterine body presents such indistinct symptoms—by no means the usual symptoms of cancer of the neck—and when the patient comes to us the disease is so far gone that no radical operation can be attempted; we have to rely upon the scoop; but in proper cases, if we can determine them, the operation should certainly be attempted, because these patients die rapidly when once the disease has a firm hold on the body of the uterus.

Dr. Gregory.—I never attempted to remove the uterus on the living subject, but, as I stated a while ago, I have opened the abdominal cavity several times. On one occasion, when Dr. Moses removed a cervix, I recollect we discussed the subject of the removal of the uterus, and I recollect we could lay our hands on the uterus through the wound we had made in the vagina, and the seeming readiness with which we thought we could have removed it. Of course we didn't attempt it. The patient recovered.

Dr. Coles.—It seems to me that the point made by Dr. Engelmann is very well taken in regard to the choice of the operation—that is, between the abdominal section and the vaginal operation. I think we should choose that operation whereby we can form an idea of the amount of adhesions, and the character of those adhesions. In the vaginal operation, the operation must be pretty well advanced before we can form any idea of the existence or extent of the adhesions.

Dr. Maughs.—I think the vaginal operation is almost universally recommended by experienced operators; and statistics show that it is very successful.

Dr. Gregory.—I don't see how we can determine the probable infiltration in the vaginal operation with anything like accuracy, and it seems to me that the safest operation is the abdominal section.

Dr. Maughs.—That would seem so, and yet how do you account for the success of distinguished operators?

Dr. Engelmann.—I think the reason why the vaginal operation apparently gives such good results is probably owing to the fact that all the cases that are operated upon are reported as successful, even if the patient lives but a short time after the operation.

Dr. Maughs.—If that is so, it would be a very strong argument in favor of the abdominal section.

Dr. Papin.—I will take issue with Dr. Engelmann and Dr. Gregory in the choice of the operation, and give what appears to me to be the correct view of why the vaginal method would be preferable to the opening of the abdomen. The extent and length of time during which the peritoneal covering is required to be exposed, in a diseased condition already far advanced, such as we have been talking about to-night, would render such an operation always exceedingly dangerous, and very often fatal; and the operation when performed through the vagina, according to the reports of eminent surgeons, is attended with much better results—more cases recover from it, though they may have failed in removing the uterus itself. On the whole, where the diagnosis is so difficult, so obscure, so absolutely uncertain, it seems to me that it is the part of a conservative surgeon to take the method which would be the safer, and hence I would prefer the vaginal operation. In making up my mind whether I should operate or not, I would take into consideration whether there is probable infiltration of other organs or not. The methods of diagnosis are so few, and so obscure, that I think we should be guided largely by one thing, and that is whether there are adhesions or not; we should be guided by the extent of the adhesions as manifested by the mobility or immobility of the organ that is diseased. If, after making a careful bi-manual examination, I should find the organ very much enlarged, and very immovable, I would attempt neither method. I would argue the matter to myself in this way: Here is the body of the uterus, carcinomatous evidently—the whole history leads to that conclusion—it is very much enlarged in size, and the adhesions are so extensive that the uterus is absolutely immovable, and in this case I would not attempt more than medicative treatment. Why should we

attempt the hazardous operation of making an abdominal incision? I am almost certain that my patient will die, either from shock or from peritoneal inflammation following the operation. On the other hand, if I make an attempt through the vagina, the already increased size of the organ, the infiltrated and hardened tissues, which heretofore have been soft and movable, will give me such an amount of trouble as to absolutely preclude the idea of extirpation of the organ in that way. I am inclined to eradicate as much of the disease as is possible with the knife and scissors. I have seen two of these operations—one that Dr. Engelmann spoke of, in which he opened the abdomen of a patient and found that he could not remove the uterus on account of the adhesions; and the other, an operation by Drs. Maughs and Lankford, at St. Mary's Hospital some years ago, on a patient who had a sarcomatous growth and diseased condition of the body of the uterus, with some manifestations of cystic degeneration—one of the cysts arising from the posterior part of the cul-de-sac of Douglas. A very small and careful incision was made, and after making an exploration all of us agreed that the adhesions were beyond precedent. The wound was closed carefully, and in less than 24 hours the woman died, not from shock, but from peritonitis. I have never performed the low operation, and have never seen it performed, but from the fact that it is recommended by surgeons of known skill and prudence, in spite of what has been said here, I am disposed to take issue with these gentlemen, and I think that where there is so much darkness, so much doubt, the best method, and the method which should be chosen, is that which is the safest.

Dr. Prewitt.—It seems to me that there should be a distinction made between cancer of the body of the uterus, and cancer of the cervix. Cancer of the body of the uterus may make considerable progress before it is discovered, and there are certainly great chances for adhesions to occur. There would necessarily be a great deal of difficulty to determine whether adhesions existed or not, because we may have adhesions to the omentum, intestines and bladder, and there still be a certain amount of mobility to the uterus. But so far as the abdominal and vaginal operations are concerned, it does seem to me that it is quite as easy to explore the uterus and

the pelvic cavity through the opening made in the cul-de-sac of Douglas, as it would be through the abdominal incision, while the risk to the patient would probably not be so great. Certainly statistics go to show that the vaginal operation is more successful than the abdominal. Now I am not sure that this showing is due to the cause that Dr. Engelmann assigns it to—that the cases that do not get well, but yet recover from the operation, are counted as successful cases. It is very difficult, as you all know, to get beyond the limits of the cancerous infiltration. It seems to me that the advantages claimed for the abdominal section are not so great.

In regard to cancer of the cervix, it seems to me this is likely to be the class of cases in which the removal of the uterus will be the rule. In cases of cancer of the body the difficulties are too serious—as they are in cases of cancer of the stomach. Doubtless resection of the stomach would be more popular were it not for the insurmountable difficulties which attend it. It is impossible in the majority of cases to make a diagnosis of the extent to which the cancerous infiltration has gone, or of the possibility of removing the cancer. It is impossible to tell. We meet with a case that appears to be a good case for the operation, and upon attempting to remove it we may find that it is impossible to do so. Where there is a case of cancer of the cervix and the diagnosis is made out early, there is a strong probability that the whole of the disease can be removed. It is a comparatively safe operation. The recent reports of cases make it appear a favorable operation. I believe it would be a justifiable operation. The excision should be done before the disease has passed up and infiltrated the body—before there is a likelihood of infiltration.

Dr. Gregory.—In regard to abdominal section I would state that I hold it to be the duty of every surgeon, when he undertakes to remove a tumor, to plan his incision in such a way as to command the entire limit of the disease. I hold that to be his duty, and I think and feel that in attempting to remove any abdominal tumor it is much better to open the abdominal cavity above the pubes than below it. I think it is more difficult to open it through the vagina. Then again, suppose there is disease beyond the uterus; by opening the abdomen we may be able to command and remove that additional disease,

whereas if we remove the uterus through the vagina the probabilities are that we cannot reach and remove this through the incision we have made.

Dr. G. A. Moses.—I am very glad that I brought this subject up, although we are basing our arguments entirely on theoretical grounds, on the reports of others and not on personal experience. Undoubtedly the question is one of diagnosis at the outset, till by the use of the microscope we can determine almost certainly that it is a malignant disease; and when we are satisfied that the disease cannot be controlled at all by judicious remedies, consultation should, of course, be called in, and then the earlier we operate the better. So far as adhesions are concerned, we know that adhesions are liable to occur. There may be adhesions to the bladder, and the wall of the bladder has been removed, in the first place accidentally, and then again intentionally, and the bladder wound has recovered; the question is whether the adhesions to the adjacent parts are so extensive that the operation cannot be completed. I believe with Dr. Gregory that in attempting an operation we should be prepared to remove all the diseased parts which are attainable, unless so extensive that the impropriety of it would be obvious. So far as regards the site of the selection for the operation, I stated, and I still believe, that in our present light, so far as our present knowledge goes, the operation per vaginam seems to be the one. I don't see that there will be more difficulty in operating through the cul-de-sac of Douglas than there would be through the abdomen; and in addition to that, if we found that the disease extended to such a degree that we couldn't remove it per vaginam, it would not then be too late to make an abdominal section. I believe, as Dr. Prewitt has stated, that in the future, and not very far off either, we will neglect the cervical operation and prefer to excise the entire organ.

Second Ovary Removed by Abdominal Section.

Dr. Engelmann—I have a specimen to present—an ovary. The only point of interest about this is that it was the second operation for the removal of an ovary. One ovary was removed from this patient two years ago on account of menstrual trouble and dislocation of the ovary. But the menstrual

trouble recurred, and among the troubles were hysteria and nervous symptoms. The right ovary was removed first, and the left was not taken out then on account of its being healthy. Finally, as it was giving her a great deal of trouble, and as the patient couldn't work, this ovary was also removed. It was suspected, of course, that it was full of cysts. It doesn't show the cysts at all now. The point of interest about the case was the difficulty of the operation. The first operation had been made in the median line, and I consulted several gentlemen before doing the second operation, in regard to the best point for incision. The incision was made about three quarters of an inch to the side of the median line, and it is on account of this difficulty that the principal interest arises. On opening the cavity there was no trace of inflammation. The intestines and peritoneum were as perfect as they were on the first operation; there was not a single adhesion to the uterus; the Fallopian tubes were perfect, so were the fimbriated extremities. There was not a trace of inflammation from the first operation. The difficulty encountered here was the bleeding from the vessels which were struck.

Dr. Gregory.—Did you find any advantage from this incision?

Dr. Engelmann.—No, sir; I should have preferred to make the incision in the median line, but I couldn't do that on account of the previous operation.

Dr. Maughs.—This incision has been recommended by some on account of the more firm condition of the abdomen after operation. It has been advised by some high authorities.

June 15th, 1882—Dr. G. M. B. Maughs, President, in the Chair.

Management of Labor.

Dr. Montgomery read a paper on "Suggestions on the Management of Labor with a View to Obviating the Tendency to puerperal peritonitis, metritis, pelvic cellulitis, septicemia, etc." (Vid. p. 331.)

Dr. S. G. Moses.—Dr. Montgomery's paper is excellent, as far as it goes—it is practical, useful, comprehensive; but he has not made in his paper the divisions of the stages of labor, which certainly require different forms of treatment. In speaking, for instance, of inertia or slow labor, before the mem-

branes have ruptured, patience and time is the best treatment, according to my experience. In the first stage of labor, so long as the liquor amnii has not been evacuated, very little or no injury has been done to the uterus or its appendages, or to the fetus, and therefore it seems to me that this stage of labor requires very little treatment of any kind; and if we have slow labor with occasional pains, we let the woman alone; or if the nervous system becomes exhausted, give her a dose of quinine. It is admirable under the circumstances. It gives tone to the muscular and nervous powers. We give it in five or ten grain doses. If the pains are excessive and wearing, so that they tell on the woman's nerves, I give her an anodyne; the best that I have used is chloral hydrate. It quiets the sensibility, gives the uterus a little rest, and relieves the nervous affection, and is entirely harmless to both mother and child. If the patient has a high and bounding pulse, and headache, I believe in using venesection. If the uterus is hot and dry, and the pulse high and bounding, I have never seen any harm from its use. I don't like to give depressants; I don't want to depress the nervous power of the woman. I want to sustain it, and therefore I never give aconite, or at least very rarely in cases of this kind; I never give veratrum viride under such circumstances; it is very dangerous; it produces a most powerful depression, and it does not depend entirely upon the number of drops you give. It doesn't diminish the temperature; it is not an antiphlogistic; it is a nerve depressant; and if I were to give anything I would rather give digitalis, to strengthen the heart's action instead of diminishing it; and to give tone to the organs I would give quinine. But if the labor is going on; if the patient is in the first stage of labor, has no fever and has more or less pain, and there is simply a want of power in the uterus, I would let her alone and wait until the proper time comes. There is no hurry; there is no necessity for haste, because there is no danger to the mother or child unless there is fever, headache or symptoms of convulsions.

Now, in regard to the second stage of labor, after the membranes are ruptured, and the presenting portion of the child is partially expelled from the pelvic cavity, we all know that it is necessary to give some treatment. If the woman has rigidity of the perineum, and the vagina is very hot, we must make

some application to the perineum—at any rate, if the rigidity is considerable, and the pressure on the vagina is of a severe character; and if the vagina is dry and hot, we know that nothing relieves the symptoms like a few ounces of blood taken from the arm. I have never seen it do any harm. If inertia comes on after the presenting portion of the child is occupying the cavity of the pelvis, then we should give repeated doses of ergot, and use the forceps.

The use of strychnine under such circumstances is too slow; and you don't know what you are doing. I had a patient once whom I had been attending all her lifetime, and I gave her one-sixtieth of a grain of strychine, repeated three times a day in a tonic mixture. On the second day she said to me—she didn't know what she was taking—"Doctor, I can't open my mouth." Well, I didn't think it possible that this dose of one-sixtieth of a grain three times a day could produce this effect. I left word for them to give her one one hundred and twentieth of a grain; but the rigidity of the jaws continued, and there was a spasmodic action about the tongue, so I stopped it. There was evidently an idiosyncrasy with this patient; but we don't know what we are going to do when we give a patient strychnine until we try it, and therefore when there is inertia of the uterus and we give a patient one twentieth of a grain of strychnine every two, three or four hours we don't know what we are going to do. Ergot is an efficient remedy in these cases, and the bad effects which occur from the exhibition of ergot of rye in labor are owing to the fact that it is given at an improper time. Ergot never should be given until the membranes are ruptured and the waters evacuated. Ergot is an invaluable remedy. With regard to the use of the forceps under such circumstances, I think that if the forceps are used it should be with a great deal of care and very slowly, imitating as far as possible the natural labor. It has been my habit for a great number of years to give a dose of ergot just as the head is emerging from the vulva, yet I believe I have seen a great deal of trouble to myself, and a great deal of trouble to the patients, and perhaps a few cases of septicemia, by thus producing a tonic contraction of the uterus. I am not speaking at all of the treatment of puerperal fevers, that is a subject that is enormous; but I will say this, that

quinine reduces the pulse and temperature, when given in proper doses, not in two grain doses, but in five, six, ten and twenty grain doses if necessary, until you produce an effect. Of course it is necessary to wash out the uterus; of course it is necessary to destroy the focus and the cause of septicemia. Had I washed out the uterus some years ago I might have saved one or two valuable lives. I have often blamed myself for not having used free washing out of the uterus in cases of puerperal septicemia. Then we have the so-called antiphlogistics; there is veratrum viride. I think this does not produce the effect that is necessary; it doesn't reduce the temperature rapidly enough. If we have a patient with a temperature of 104°, 105°, 106° or 108°, we wash the uterus out, we get rid of the debris as soon as we can, and then give large doses of quinine. We may use the cold pack; we may use the cold sponging to reduce the temperature; the patient will die if we do not reduce the temperature. I recollect being called in consultation with a physician in New Jersey, some fifty years ago, who was treating a patient for puerperal peritonitis by the application of iced bags to the abdomen, and the patient recovered. I know no better germicide than the spirits of turpentine; I know of no remedy that is superior to it. I am opposed to the use of depressant agents, which merely derange the stomach and bowels, and do not have the least effect on the temperature of the body.

Dr. Prewitt.—There are a few points that I will remark upon. One, for instance, is about veratrum viride. I don't like to say it is a dangerous remedy, as Dr. Moses says. I have used it a great deal, and I have seen it make a very marked impression, bringing down the pulse as much as forty beats in a minute.

Dr. S. G. Moses.—How about the temperature?

Dr. Prewitt.—Well, in those cases I think the temperature would be reduced. I never tried the temperature when it had produced this marked depression. I have seen it bring the pulse down forty beats in a minute in cases of pneumonia, and what is very singular is that I have never seen the fever come up again after the pulse was restored to its normal standard. The patient would convalesce without any trouble whatever. I remember a case, when I was quite a young practitioner, in

which I gave veratrum viride for pneumonia, and the pulse became very greatly reduced; it was certainly not more than sixty beats a minute; the skin was cold, and the patient seemed to be greatly prostrated, vomiting more or less. I didn't try the temperature. We didn't use thermometers in those days. I gave her a little opium and whiskey and she rallied, and the pulse came up to perhaps 80, but she had no fever, and after that convalesced steadily. I have seen other cases of the same kind. It is very seldom that there is a failure to rally. It is true that I recollect a case of what is called typho-malarial fever, in which I gave veratrum viride, quinine, etc., and it produced a good deal of prostration, from which the patient never did rally, and he died. I think he would have died anyhow; but I was not pleased with its action in that particular case. I don't regard veratrum viride as a dangerous agent in these cases. But in regard to the cases that Dr. Montgomery speaks of, in which there was depression of the system with puerperal fever, I don't see how it would benefit the patient. I do not believe that it reduces the temperature. I am assuming that there is no relation between the frequency of the pulse and the temperature—none whatever. Besides, in puerperal fever we have a poison in the system, and I don't see how veratrum viride would benefit that. I have tried it again and again in ordinary fever and I have never seen it produce that effect. It might be that, if the pulse was very quick and the heart's action very rapid in a case of puerperal fever, the veratrum might do some good in reducing the frequency of its beats.

Dr. Moses.—Did you ever see the pulse very quick and the heart action very rapid that it was not feeble?

Dr. Prewitt.—That is very true, but veratrum reduces the frequency of the pulse without reducing the volume necessarily. I am satisfied of that. I must say that I am not satisfied that it does control the temperature. I am like Dr. Moses with regard to the use of strychnia. I should certainly be a little apprehensive in giving it in one-twentieth grain doses repeated every two or three hours, even to the second or third doses. I have seen less doses than that produce evidences of the effect of the strychnia.

Dr. Coles.—I haven't anything to say except one word in reference to the doctor's suggestion in regard to the use of

strychnia. It struck me with considerable surprise that Dr. Montgomery should speak so confidently in regard to the use of strychnia, inasmuch as I never heard of it before. Of course Dr. Montgomery's age and experience make his observations valuable; and I am all the more surprised that the doctor is satisfied with the use of the strychnia, and that he has not come across some disagreeable results from it. Now we are taught to believe that strychnia is a spinal excitant; and I should think that it would be apt to cause convulsions in a female who is so prone to convulsions as the female is under these circumstances. We know that the parturient female is especially susceptible, and that manipulation of the os, or the pressure of the head upon the perineum, will often cause convulsions; and I must confess that I should feel uncomfortable, uneasy, if I were to give strychnia in such large doses every three or four hours. The woman is already predisposed to convulsions, and I should think that strychnia under such circumstances would hasten the result. I know that some persons can take large doses of strychnia without producing any effect—at least without any serious result. I remember that some years ago a paper was read before the St. Louis Medical Society by Dr. Kennard, in which he stated that in treating a patient he gave strychnia in quite a large quantity, and was surprised to find that it did not produce any specific effect. He got some strychnia elsewhere and gave it hypodermically, and his patient came very near dying. He had to stay with the patient all that night. Some persons take large doses of this drug with suicidal intent and get over it, but I should be afraid to give a parturient woman strychnia.

Dr. Boisliniere.—There is a man in San Francisco who takes three grains of strychnia. It is an idiosyncrasy, but while this man can take that quantity another man might be killed by one-sixtieth of a grain. I know a man who will not tolerate the one-sixty-fourth part of a grain. I would be afraid to give the one-thirtieth or one-fortieth of a grain of strychnine and repeat the dose so that in a short time it amounts to the one-quarter of a grain. I would hesitate to give over the one-thirtieth or one-fortieth of a grain. It is a uterine tonic, and there is danger, perhaps, of these tonics favoring the rupture of the uterus. My rule is not to give ergot until the present-

ing part of the child is out of the uterus. If the head presents, we should wait until it has passed from the uterus, or there is danger that we will rupture the uterus. I remember a case in which I was called in consultation with Dr. ——. I was called to apply the forceps. I found when I arrived that the labor had been delayed. The woman was in good condition; it was a head presentation, rather low, and I found that there was a severe rupture of the uterus. The doctor had given a dose of ergot when the presenting part was not out of the uterus. I never give ergot until the presenting part is out of the obstetric canal. I give two doses of ergot, one before the birth of the child, and a large dose, a teaspoonful dose, after the birth. I very seldom have post-partum hemorrhage, except in very unfavorable cases: post-partum hemorrhage will not occur if you give the ergot in this way. In primiparæ, ergot is useless, as there are always pains enough; and secondly there is great danger that if you give ergot you will cause rupture of the perineum.

There is one point that Dr. Montgomery left out; that is the obstetric position, and then the administration of anesthetics in labor; but this is a great theme, and one that cannot be entered into this evening; the giving of anesthetics in labor, and then the obstetric position and the propriety of allowing the woman to walk the floor, etc,, during the different stages of labor.

Dr. McPheeters.—What position do you prefer when the head is about to be born?

Dr. Boisliniere.—I put the woman upon her left side, as I can maintain the perineum better than in any other position. Then in regard to what the doctor calls inertia, or lingering labor, much good may be accomplished in these cases by making the patient walk the floor. It is perfectly harmless. Then we may give an enema of turpentine. If the woman is allowed to walk the floor, care should be taken that she has time to reach her bed before the child is born. Of course these cases of lingering labor do not require the use of an anesthetic, as this is already in excess. Chloral may be given, as it relaxes the rigidity of the uterus. It is the practice among some obstetricians to bleed, if the patient is plethoric; I very seldom do that. In the management of labor we often find that the woman is

troubled with nausea; for this I give for a month before the labor a tumbler of hunyadi janos every morning, and then I give pills composed of camphor, sulphate of iron, sulphate of quinia, and veratrum. I take two scruples each of camphor, of the sulphate of iron and quinine, and of veratrum five grains, and have twenty pills made. I begin giving these eight days before labor. They seem to expedite matters.

Dr. McPheeters.—I wish to say a few words in this connection. I don't see any use in going over the A B C of the management of labor—those things with which we are all familiar. I suppose each of us has his own experience, has his own notions in regard to the management of labor in general, and each one is satisfied with the results of his method—of what we call our own experience. I can say that I have my own experience; and I dread a case of puerperal peritonitis. In regard to ante partum treatment, I think a great desideratum is to keep the bowels open. There is apt to be a partial paralysis of the cecum, colon, and other portions of the intestines, with edema of the lower extremities, and it is very difficult sometimes to keep the bowels open. This should be done if possible. We should keep the kidneys active. I always feel anxious when there is a great deal of edema of the lower extremities. In regard to the use of ergot, I will say that I never use it until the child's head is expelled from the uterus, and not then if the head is pressing upon the perineum and it is much distended. I never use strychnine at all. I have recently seen it recommended very highly.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, Sept. 7, 1882—Vice-President J. Solis Cohen in the Chair.

Case of Carcinoma Mammæ.

Presented by Dr. L. B. Nancrede for Dr. Chas. Wirgman.

Mrs. Josephine M——, æt. 48 years, married at 23, the mother of three children, the last born 16 years ago. Had nursed all her children, but the last died from marasmus, owing to the small amount of milk the mother had, although

lactation was free after the two first confinements. She never had any abscess of breast, traumatism or eczema of the nipples, although she had always experienced pain and uneasiness in the right breast when nursing. There was no trace of carcinoma in family history. A sister had had an enchondroma of one of the metacarpal bones. When young the patient had suffered from dyspepsia, and on one occasion had had an attack of hemoptysis. Of late years Mrs. M. had grown very stout, although never robust nor strong. About the middle of June, 1882, she first noticed a lump in her right breast, at its upper inner quadrant, about the size of a hen's egg. A few nights previously she had been awakened by a severe lancinating pain in the right breast, but experiencing no further inconvenience she paid no attention to it. The mass did not seem to grow till handled; an exploring needle had been inserted, when the growth became softer, much larger, painful, and the skin and superjacent veins rapidly showed marked changes. I saw her Aug. 6, '82, with Drs. Wirgman and Hearn, when the only additional points to be noted were that the growth was freely movable with the breast upon the chest walls, and that a mass the size of a pigeon's egg could be felt in the axilla, under the outer margin of the pectoralis major muscle. Dr. Wirgman removed the whole breast by two semicircular incisions, opened up the axilla, and removed all the glands up to the clavicle. This operation again emphasizes what Dr. S. W. Gross has specially insisted upon, viz.: that although the axillary glands may appear, before operation, uninvolved, when the axilla is opened, numbers are often found enlarged. This accords with my own repeated experience. Although slow in healing, the case has done well since operation.

This case presents special points of interest, which I shall now dilate upon. In the first place, its history and appearance were eminently suggestive of a rapidly forming sarcoma, which was either cystic or, what at once suggested itself to me before etherization, one into whose substance hemorrhage had occurred. Upon examination under ether, the discovery of the enlarged gland at once suggested the strong improbability of sarcoma, which view I abandoned. After the removal, the macroscopic appearances once more threw doubt on the diag-

nosis, as there was for at least one-half, if not more, of the circumference of the growth a distinct *appearance of a capsule*, and, as I had surmised, the tumor had been broken down by a hemorrhage into its substance. Subjected to microscopic examination, the specimen was again puzzling, since sections of the first pieces imbedded showed in every portion of their extent—with a very few slight exceptions—small spindle-cells of a connective tissue type. Dissatisfied, I imbedded a second piece, sections of which revealed a typical carcinoma of the soft variety. This again illustrates what I have many times insisted upon in this society, viz: that either very large sections of growths should be made, as Dr. Seiler advocates, or sections from several and varied portions of the morbid mass should always be carefully examined. Dr. Tyson said that the presence of a capsule seemed to be clearly demonstrated.

Recurring Carcinoma of Mamma and Axillary Glands.

Presented by Dr. L. B. Nancrede.

The patient, Mrs. F., æt. 37 years, from whom the specimens were removed before the discovery of the primary tumor, about 18 months back, was in perfect health, although from pecuniary losses she had undergone much mental anxiety since the Chicago fire. Hearing a vivid account from a friend of another case of carcinoma mammæ, her mind became deeply impressed, and shortly after she discovered a growth in the upper inner quadrant of the left breast, which continued to grow until it had attained the bulk of a small orange at the time of first operation, viz.. one year after her first discovering it. She lost much flesh from the time of the discovery of the growth; she had never suffered from any form of traumatism, had had no eczema of the nipple, and though she had borne one child a number of years back, and had suckled it, had never had sore nipples. There was nothing which could be fairly construed as an hereditary history of carcinoma. The primary operation had consisted in a removal of part of the breast. In less than two months after this a small nodule appeared in the cicatrix, while the axillary glands began to enlarge rapidly. On July 8th, 1882, I saw her in consultation with Drs. R. R. Taylor and Harlow, when I found that there was a small nodule in the middle of the original cicatrix, while the axilla was occupied

by the mass of indurated glands which I here present. The growth partially embraced the axillary artery, since when the former was compressed the radial pulse was decidedly affected. Not being allowed to remove the whole breast, I freely excised the small recurrent growth, and after a tedious dissection removed the axillary tumor, laying bare the artery and vein for a space of over an inch, clearing everything out to the clavicle, and distinctly recognizing the coracoid process of the scapula. Although not the place for a clinical discussion, I cannot refrain from emphasizing the importance of the thoroughness with which this axillary dissection should be performed. Not a single gland should be left, enlarged or not. Properly conducted there is hardly any hemorrhage, a vessel rarely requiring ligature. This case was treated on Listerian principles, but with a spray of acetate of alumina, and the wound was dressed with the same. There was no inflammation, heat, pain, nor subsequent induration, and if I remember rightly the case required but five dressings until the wound became superficial, and fewer would have been necessary had perfect coaptation been secured. One or two points, where stitches made marked tension, showed a surrounding skin blush, which disappeared on the removal of the stitch; immediately contiguous to this the wound-edge looked as if made but a few minutes before, thus showing that the irritation of *tension* was the trouble, which, as before said, very rapidly disappeared when the deeply imbedded stitch was cut. The temperature rose to 102° at the end of the first twenty-four hours, after which it remained under 100°. The pain after the removal of the pressure of the button-stitches amounted practically to nothing, according to the patient's own statements, and it will be remembered that she had the experience of a former operation for comparison. I believe that this is the first case where acetate of alumina has been used in this city in a Listerian operation, and its success disposes of the absurd statement that carbolic acid is Listerism.

Carcinoma of Stomach.

Presented by Dr. J. H. Musser.

The clinical aspects of this case were so definite that when this man applied to the medical dispensary of the hospital of

the University of Pennsylvania for treatment, early in April of this year, it was without difficulty that malignant disease was diagnosed.

He was a farmer of good habits, 53 years old, and previously in good health. For the last six months he had suffered from "weakness of the stomach" and general debility, which prevented him from working. He had lost much flesh, and had constantly a severe, sickening pain in the epigastrium, extending to the upper part of the lumbar region, which became much worse within an hour after eating. Appetite was poor, tongue clean and pale, bowels constipated, with troublesome flatulence. A tender, non-pulsatile, movable tumor extended across the epigastrium from the margins of ribs on the one side to a similar site on the other, one inch and a-half above the umbilicus. He presented an anemic, cachectic appearance.

Dr. H. Plank, of Morgantown, took charge of the case, and wrote me April 21st, 1882, that he was much benefited by the treatment instituted, but was confined to bed by sheer exhaustion. June 5th the doctor reported increased weakness and emaciation, and that the pain had extended along the left side to the same shoulder. He took but little nourishment, and he commenced vomiting June 10th undigested food, mucus and grumous purulent matter. He died June 20th of exhaustion, after a nine months' illness.

Dr. Plank kindly sent me the specimen I here present. One-fourth of the pyloric end of the stomach is involved in the growth, which extends along the greater curvature for four inches, along the lesser two inches, and completely encircles the organ. The stomach walls in front of the disease were dilated, the muscular coat being hypertrophied, and the mucous membrane congested. The mass encroached upon the caliber of the viscus so as almost to occlude it. The tumor consisted of three nodules, one of which was ulcerated on its mucous surface, and presented the appearance of a scirrhus. The glands in the lesser omentum were diseased.

Spindle-Celled Sarcoma of Thigh.

Presented by Dr. J. Henry C. Simes.

The patient from whom this specimen was removed presented himself for admission to the Episcopal Hospital on Aug. 30, '82.

He is 60 years old, an Irishman, and gave the following history: Two years ago he first noticed at the lower and outer part of the thigh a small swelling, which grew rapidly to the size of a hen's egg, when it was removed. Shortly after the wound had healed, a second tumor was noticed in the cicatrix, having the same character as the previously removed growth. This was also removed by operation, and again, in a still shorter interval, a third similar growth was developed in the same locality, which was also removed by the knife. When admitted to my wards, there was found, upon examination, at the lower and outer part of the thigh, a linear cicatrix about two inches long, beneath and adherent to which, as well as to the surrounding integument, was seen a tumor as large as a walnut, movable upon the deeper tissues, painless, dense, and irregularly nodular. There was no glandular enlargement observable. No other tumors were present. The tumor was readily removed, being adherent only to the overlying skin, which was included in the incisions. Microscopic examinations showed that the neoplasm consisted entirely of large spindle-shaped cells, which contained large oval nuclei.

TRI-STATE MEDICAL SOCIETY.

A pleasant ride over the Vandalia R. R., with its easy-riding, elegant coaches and courteous officials, made us regret that we so speedily reached the end of our journey, and that we should not have the opportunity of going over the whole length of this admirably managed road.

Terre Haute is said to have a population of 26,000 people. Whether this number be exaggerated or not, it is certainly an admirable place for holding a medical association, and the meeting of the Tri-State Society, held there last month, was a most successful and profitable one.

The sessions continued Tuesday, Wednesday and Thursday, Sept. 26, 27 and 28. All the sessions were working sessions, no time being given up to banquets or excursions of any sort at all.

Probably the most striking feature of the meeting was the

address of the celebrated English specialist, Dr. Morell Mackenzie, who is recognized as being at the head of the profession in his department of diseases of the throat and chest.

Having spent some time in making an extensive tour in this country, he accompanied Dr. Wm. Porter, formerly a student under him, to this meeting of the Tri-State Society. In honor of the distinguished visitor, the order of business was changed on Wednesday. The business meeting was transferred to the afternoon, and the time thus gained in the morning was given to Dr. Mackenzie, who gave an admirable address upon the subject of Laryngeal Phthisis.

The arrangements for the accommodation of visitors were excellent. The hall in which the meetings were held was admirably arranged; and excellent facilities were provided for all interested in making exhibits of various medical preparations and surgical apparatus without in any way disturbing the meetings in the main hall.

Not far from three hundred physicians were present at different times during the meeting, and it was universally acknowledged to be the most successful and interesting meeting of the society that has ever been held.

Dr. Wm. Porter, of St. Louis, was elected President for the ensuing year, and Dr. Harvey, of Indianapolis, is chairman of the Committee of Arrangements. Under their efficient management we venture to predict that the meeting in Indianapolis will be a great success.

In our next issue we shall give some of the papers that were read at Terre Haute.

SELECTIONS.

GOOD WORDS FOR YOUNG PRACTITIONERS.

Each of you has his aspirations—a little vague, no doubt, but none the less real. Keep them as long as possible, and

above all things do not assume or affect a cynicism which belongs neither to your age nor your experience. Second-hand misanthropy is like a second-hand Chatham street coat—it never fits. No doubt you all desire to make money; not for the money's sake, but for what you can do with it. It is not a desire to be ashamed of, and the business side of your profession demands your careful attention. But mark this: The best works in this world are not done for money, or for selfish motives of any kind. And if you are to achieve true success—the success which brings happiness, and is the only kind worth seeking—you must do a vast amount of work, not for money, but in part because you like it, and in part because it will do good and help others. Do not wait for the opportunity to do some great thing. Take hold of the work that lies next your hand; work which you can do, and which ought to be done—it will be very strange if there is not always something of that sort waiting for you; and do not dawdle, and defer, and lose the good in a vain waiting and longing for the best.

Be healthy, brave-hearted and joyous. Physical health is, unfortunately, not contagious, but mental and moral health is. Avoid second-hand philosophy, sickly complainings about the evils and miseries of life, and small beer of all kinds. No doubt you will find many of your golden dreams fading into gray mists; but, on the other hand, you will be continually stumbling against solid realities, which are quite as good as any dreams, if you only recognize the opportunity. Labor and trouble you must meet; but of the first you can for the most part make a pleasure, and the second should not be pampered and made a luxury of. Never pity yourselves. Do not waste your time in vain speculations as to the why.—*Dr. Jno. S. Billings in Valedictory to Class of* 1882, *Bellevue.*

Bichloride of Methylene is the anesthetic used in all laparotomies at Prague, because it so seldom excites nausea. It is administered with a Clover apparatus; in all other operations chloroform is used.—*Chic. Med. Jour. and Ex.,* Aug., '82.

OBITUARY.

Wm. H. Mussey, Professor of Surgery in the Miami Medical College of Cincinnati, died Aug. 1st, of apoplexy, having been struck down in his office on the preceding day, and never so much as recovering the power of speech. He was a son of Dr. R. D. Mussey, who was one of the ablest and most distinguished surgeons of his time.

Dr. W. H. Mussey was twenty years old when his father settled in Cincinnati. He spent a few years in mercantile pursuits, but then studied medicine under his father's guidance, graduating in 1848. After practicing for four years with his father, he went to Paris, where he spent two years in the farther pursuit of his professional studies.

At the commencement of the civil war he tendered to the government his professional services free of charge for the term of the war. This offer was not accepted. However, he went to Washington, passed examination, and was commissioned as a brigadier surgeon. Before this, however, he secured the fitting up of the old Marine Hospital by private contributions, and after this was thoroughly organized it was turned over complete to the government. He was appointed medical director of a division of General Buell's army, and was in active service in the battles of Pittsburg Landing and Corinth. Later, he was appointed Medical Inspector, and was present at the second Bull Run, Antietam, and Fredericksburg. His army record is one that commands the esteem and honor of all true, honest men.

The Public Library of Cincinnati contains a large and valuable collection of books and pamphlets, partly left by his father and partly gathered by himself, at considerable expenditure of time and money, and which he donated to the library.

He was conscientious, faithful, true, a devoted husband and father, a strong friend, an indomitable opponent of all sorts of trickery and vice, whether in professional matters or otherwise.

As a surgeon, as a citizen, as a man, he stood among the first of his city, and was heartily esteemed and honored by all who knew him.

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ORIGINAL ARTICLES.

A HASTY VISIT TO EUROPE AND EUROPEAN GYNECOLOGISTS.

BY GEO. J. ENGELMANN, M. D.

[*Read before the Medico-Chirurgical Society Oct. 16. 1882.*]

HAVING been kindly requested at the last meeting of the society to relate such medical experience as I may have had during the brief vacation spent in the centers of German medicine, I will now do so, but will ask you rather to share my pleasures than to bring before you an elaborate paper upon the German gynecology of to-day, as you are all too well acquainted with scientific medicine, the world over, to permit of my making such an attempt—nor am I possessed of that craving which seems to haunt every European traveler who visits America, be it for a month or two only, that as soon as he returns to his home, upon the banks of the Rhine or the Thames, he must invariably write a book about the strange land he has seen, for the information of his countrymen.

I wish to convey to you my personal impressions as to the animus of the schools, the individuality of the men, their methods, and the changes which have been wrought within the last ten years that I have been a stranger to institutions once so familiar to me. Those grand old medical schools change with the times and those who guide them; thus Berlin now stands pre-eminent, still counting such men as Virchow, Langenbeck, Schroeder, Gusserow, Martin, Helmholz, Kirchhoff, du Bois-Reymond and others among its faculty, whilst Vienna, though still upheld by that vast caravansary, its *algemeine Krankenhaus*, with its ten immense courts where thousands upon thousands of patients are united, is fast fading. The renown which it attained under Rokitansky, Skoda, Oppolzer, Hebra and other equally brilliant men, is passing away amid the petty jealousies and quarrels of their much weaker successors.

Though I can tell you nothing new, I am sure there are many points of interest which I might relate; and yet, strange to say, notwithstanding it was my good fortune to witness so much that was interesting and instructive, I find my thoughts dwelling upon one and the same subject, circling and circling about the same point until everything centers upon it. This ever recurring idea is: why is the success in abdominal surgery in Europe so infinitely greater than in our country?

I arrived in New York on Tuesday evening, and took the night train for Boston to be present at the meeting of the American Gynecological Society on the following day; Dr. Emmett, who had also just arrived, was aboard bound for the same point; and, although he had visited England, I found the same thought pervading his mind. We had made the same annoying observation—he in England, I in Germany: surgeons of no greater skill than our own, operating antiseptically or not, all seemed to have that most remarkable success. Why is it? I must confess that I have so dwelt upon this subject that I have almost overlooked everything else, and came very near annoying

you to-night by a discourse about the relative success of abdominal surgery in this country and abroad. But this is not to be a scientific paper, and I will leave the solution of this riddle to others, and will myself dwell upon more gratifying subjects.

Berlin I found very much changed; I left it just after the Franco-Prussian war, in the beginning of its rapid growth; and not only has the appearance of the city itself greatly changed, but also the University, or rather its medical department, of which alone I can speak. This is now in a progressive era of prosperity and success. Ten years ago a new dissecting room, as well as a superb new chemical laboratory, had been erected; but now, in addition to those two buildings, I found a number of other equally splendid structures—one for the physiological laboratory, another in the place of Langenbeck's former surgical clinic. The old chief delivered his last lectures amid surroundings far more satisfactory than those in which he has gained his well-earned laurels, in which he has taught so successfully that the chairs of surgery in half the universities of Germany are now filled by men who sprung from that school, who once were students and assistants of the Berlin surgeon. The new lying-in institution is the latest of these grand educational and humanitarian structures.

With veneration I looked upon the old lying-in hospital where I had spent so many days, and nights too, while under the guidance of my esteemed master, Professor Martin; this—to me ever memorable old building—soon to be closed, is now under the charge of Professor Schroeder, who will find a far better field in the elegant structure just finished, with its garden and courts, high walls and excellent ventilation.

I made my first call upon Professor Schroeder at nine o'clock, as he makes his rounds through the lying-in wards; to my great regret I heard that he had just performed three ovariotomies, which I missed by not calling

on him sooner. This busy man takes the early morning hours, before the routine work of the day begins, for such extra work, and, if possible, allows the patients to accumulate, and operates upon several at one sitting. Passing hastily through the well-known wards, with the professor and his staff, upon their visit, I saw nothing new to me, the old arrangements having been retained, the rooms clean, airy, but with no especial ventilation. I will only mention the large spray which stood upon its little table in every room, and is freely used, great attention being paid to cleanliness in all its details. As there were no larger operations at the institution during my stay, I saw little more of its workings.

The largest lying-in department at present is in the Charité, which is in charge of that accomplished obstetrician and gynecologist, Professor Gusserow, who is moreover an extremely courteous gentleman to whom I am indebted for many polite attentions, and for the assistance he gave me in the choice of instruments, which is not an easy matter amid the unusually large and attractive collection of gynecological instruments which I found at one of the makers', Windler's.

Of all the institutions I was most attracted by the private hospital of Dr. Martin, son of my old teacher, who is so rapidly carving a name for himself. Not a day passed here without some operation or other of interest; and I was gratified to see that he performed all operations upon the uterus, done per vaginam, by the same method which I have followed for the last few years. He invariably operates upon the back with Simon's specula, under a stream of carbolized water. I should myself, however, somewhat dread following his method in all detail, as he draws down the uterus with an instrument which seems to be a great favorite in Berlin at the present day, nothing more than an ordinary American bullet forceps. He uses an ordinary scalpel, never resorting to the longer knives customary for such operations. This dragging down of the uterus, the

great tension to which all the parts are subjected, and which would certainly seem injurious, never does harm in his hands. The patients all do well, and not infrequently does he perform an amputation of the cervix, or an Emmet's operation, and allow the patient to return home in an hour or two, and they all do well. It was most astonishing to me, in passing through the wards, that the temperature charts of all the patients showed but trifling deviation from the normal: whether it was an extirpation of the uterus, of which he has done more than a dozen now without a death, whether it was a removal of the uterus for fibroids, an ovariotomy, a laceration of the perineum or of the cervix, they all seem to get along without fever, pain or suppuration. There was no elevation of temperature unless, perchance, the patient committed some indiscretion—had gotten up too early or yielded to some other temptation, when the temperature would suddenly shoot up. His attention to cleanliness and antisepsis is extreme: his rooms, his instruments, his own person as well as that of his assistants, nurses and students are all subjected to the rigid laws of Listerism; and an excellent point is the simplicity which he endeavors to attain in operating. His instruments are: a few of Simon's specula, a half dozen bullet forceps, a few scalpels, a pair of scissors, some very strong curved needles, a needle holder and a quantity of hemostatic forceps. I saw him perform an ovariotomy, and not a very simple one either, in fourteen minutes. He operates sitting between the patient's legs, amid a thick mist of spray which fills the room, not directed upon the wound. So severe was this, that in a more difficult operation, lasting some three quarters of an hour, it became so intense as to force myself and several others from the room. He uses no trocar, taking out the cyst in toto and, if necessary, but rarely, cutting it open with a knife. I may say with the French surgeon, who, witnessing one of his operations completed in ten minutes, exclaimed in astonishment at its completion: "*C'est la*

simplicité de la simplicité." A good heavy silk thread, one and the same, serves him for all his operations. Iodoform he with others uses freely, and I was a good deal astonished to see a cavity, from which he had removed a suppurating cyst, filled with iodoform before being sewed up, and heal by first intention. Thus iodoform was placed, not only in open wounds, but in a cavity not open, a raw surface, which was then closed and did not suppurate.

I must say that the pleasure of my visit to Berlin was very much enhanced by the large number of former fellow students and class mates whom I met there, many of them now well known in scientific medicine, and all connected with the medical department of the university in various ways. I see their names especially in the announcement of the *Ferien Cursus*, quite a new arrangement in Berlin—a very thorough series of lectures during the fall vacation, lasting from the 20th of September to the end of October. It is an excellent undertaking, thoroughly carried out.

The Vienna school still commands its enormous hospital material, although the outdoor department has suffered greatly by the poly-clinic which was established near by some ten years ago, and is now in a most flourishing condition; in the hands of specialists—good men—it has grown enormously so as now to command the outdoor material.

Billroth, probably, stands at the head of the medical faculty of to-day. Among the well-known men, professors of my day, who were in the city at the time, I saw only Braun and Spaeth, and even these were not in active service.

It was vacation time, and everything was moving listlessly on. The progress of antisepticism was shown by the thorough cleaning process which was going on in many of the wards, especially the lying-in wards and Braun's operating rooms. Probably nothing but this very thorough cleanliness which is now exercised leads to such comparatively good results within the walls of that massive and immense old structure.

Of gynecology I could see comparatively little, as the leading services were not in operation; but by the kindness of Drs. Cohn and Funk I was enabled to witness a number of gynecological operations in the surgical wards. I was astonished to see the Ferguson speculum, or what is the same, Leiter's cylindrical hard rubber speculum, used extensively. The spray is being done away with in Vienna, and cleanliness more than antiseptics is looked to; still in their dressings carbolic acid, salicylic acid and iodoform enter extensively. The results here in abdominal surgery are not what they are in other German schools or in England, and this again brings us to the question which is so important to us: why are the results of abdominal surgery in England and Germany (not France) so much better than in this country? It is not Listerism, because the results of the operation are the same, whether done under the spray, as by Martin, Hegar and Thornton; or without it, as by Lawson Tait, Keith and others. Is it in the climate? or in the greater resistance of European woman?—who certainly, like the European man, is a less nervous organization than the American.

However, this is again approaching a scientific subject, and I will close my scattering remarks by referring to some new features, new to me at least, in gynecological instruments, which will be of interest at least, if of no especial importance. Leiter, of Vienna, who has always surpassed in hard rubber work, has produced several instruments in which he has coated the steel with hard rubber; in many cases it answers an excellent purpose, being a most cleanly material and not attacked by any influence. Thus it seems to me advantageous in obstetric forceps, and most especially in the uterine dressing forceps, the instrument, perhaps, most freely used by the gynecologist, with which acids, nitrate of silver and iron are so often handled. To me at least it has been a great annoyance, notwithstanding repeated nickel-plating, to see my forceps always in such a tarnished, ugly condition. The rubber coating of the in-

strument completely does away with all these objections; nor is it less light or graceful for that addition. A friend recently complained to me of the difficulty of finding an instrument—a forceps of some kind—strong enough to firmly seize a large tumor, either within the vagina or uterus. I am sure that he would be pleased with the one now in my case, which is a sample of all of Billroth's instruments—strong and heavy in the extreme; and this sample hardly does it justice, for this is only the smaller size of Billroth's polypus forceps; an instrument with prongs as strong as a hay fork, an inch and a half long, and as I say the *smaller* one, and even *more graceful* than the original, because I had this made to my order with some changes. It is somewhat longer than the original in the handle, and I have added the clamp so as to enable me to fasten it. His curved needle, almost a foot long, and at its point fully a quarter of an inch broad, ranks well in the same class. An instrument apparently as clumsy, but certainly most excellent and serviceable is his clamp forceps, used in the compression of large pedicles of fibroids and ovarian tumors.

Another instrument to which I would call your attention, although not new to you, is Leiter's *Wärme regulator*, which seems to be used extensively in Vienna. It has never found favor here, nor did it appear practical to me, and yet it is used so much in its home, and the reasons assigned for its use are so excellent, that I would beg to mention them briefly. You all know this coil of zinc pipe which is to serve in place of the poultice and the ice bag, carrying a constant stream of water, hot or cold. They say that the old methods of the poultice and ice bag do not confine their effect to the place to which they are applied, but go far beyond; they are not localized, and moreover that their effect is not uniform; the cold compress or the ice bag slowly warms while the poultice cools. You can neither regulate the temperature by degrees, nor can you keep it constant. Much time and service is needed in the applica-

tion and constant changing of the poultices requiring continuous attention, and in the changes the patient is endangered, he is liable to catch cold. Fortunately the reasons given against the ice bag in Europe do not hold good in this country; they say the expense is enormous; that it is rarely to be had when needed, etc., *i. e.*, not the bag, but the ice.

These coils of metal coated with tin are pliable and may be applied to any part of the body; they are excellent conductors, hence not open to the objection of the rubber coils, which prevent perspiration, often irritate the skin and, above all, are non-conductors. The method of application is very simple: a large vessel containing water of a known temperature is placed at a certain elevation, varying according to the effect required, above the patient; a rubber tube carries the water from this to the coil, applied to the diseased member, and after coursing through this it is carried off by a second rubber tube into a second vessel underneath the bed. All that is required of the nurse or assistant is to refill the supplying vessel every four to six hours, and even then he need only pour the water already used from the waste vessel into the supply vessel. With the metal coil, ice water, or very cold water, is not needed to attain all the effects of ice—remarkable as it may appear, well water will answer; when water of ten to fifteen degrees C. (50°—60° F.) is used, a more rapid and better result is attained than with ice: within ten or twenty minutes a very marked reduction of temperature takes place; and if water of two or four degrees C. (35°—45°F.) is used, the part of the body to which the coil is applied becomes insensible in a very few moments; it will produce complete anesthesia, an object not to be accomplished by ice when used in the ordinary way. If the fountain is placed high so as to permit of the rapid circulation of the water through the apparatus a greater degree of cold is attained, so that with water only moderately cool a very great reduction of temperature can be achieved. In the same way water

moderately warm will produce a greater degree of heat in that part of the body to which the coil is applied, and the degree of heat may be varied by the heighth of the fountain, by the rapidity with which the water passes through the coils. If water of eight or ten degrees C. (45°—50°F.) in temperature is used, linen must be placed between the coil and the body, for the bare surface would not long suffer that amount of cold.

The apparatus seems rather heavy, but in case of intense tenderness on pressure, for instance in peritonitis, it may be suspended so as to approximate, but not to touch, the body, and yet its effect is perfect. Great simplicity is claimed for this apparatus, and yet I, with others in this country, have always dreaded its application on account of the apparent trouble it would cause. It is propably the case with this, as it is with all other instruments, that we prefer that with which custom has familiarized us; for all that we should not hesitate to profit by the good things obtained by the experience of others.

One reason, and a very evident one, of the progress and success of gynecology abroad is its limitation as a specialty, and its acknowledgment as such by the profession and by the laity. Gynecology is the one most important of all specialties, dealing with the health of the mothers upon which the happiness of homes, the mental and physical development of the race depend.

To the old world this is an acknowledged specialty, but unfortunately for us, above all in the West, we are still far from attaining that point. If the ear or the throat, but especially if the eye is concerned, the anxious owner of the diseased member hurries off in search of a specialist, often without mentioning the matter to the family physician; but if the mother is suffering in that vital organ, the family physician is always first consulted and keeps the case, unless easily relieved, until sad experience sends the sufferer to the specialist. Neither the medical profession nor the laity as yet have the proper appreciation of gynecology

as a specialty in this valley, notwithstanding the achievements of American gynecologists.

Until a change takes place we must look to other countries, more advanced in this respect, to lead in operative gynecology.

3003 Locust Street, October, 1882.

TREATMENT OF HEMORRHOIDS.

By S. S. Todd, M. D., *Prof. of Obstetrics and Diseases of Women, Kansas City Medical College.*

In reply to an inquiry from Dr. K., of Litchfield, Ill. (received by the editor), and in answer to inquiries coming from several other sources, I will make a brief statement supplementary to my article in the Courier of September, 1881, on the treatment of hemorrhoids, in which injection of a solution of nitrate of silver into the sac is the leading feature.

Dr. K. asks if the quantity of nitrate of silver in solution sufficient to inject five hemorrhoidal sacs—in a case which he supposes—with an average of seven minims to each, equal to four grains and a fraction of the salt, would not be hazardous.

My answer is, that the silver cannot enter the circulation as a nitrate, for the presence of albumen everywhere in the tissues, and the affinity for this substance is such that the nitrate is instantly converted into an *albuminate*—a substance locally harmless. The quantity of silver in the compound, too, is quite too small to cause discoloration of the skin, or endanger such a result.

Since I first called attention to this mode of treating hemorrhoids, experience has shown that the statement in that article, that this little operation is without pain, needs qualification. In no case, however, has the pain been very

severe, and in 20 to 30 minutes it has nearly ceased. In one or two cases only have found it necessary to administer a little chloroform or a hypodermic injection of morphia, for the relief of the smarting pain caused by the injection of the solution and the handling of the parts.

If the tumor be external, partly covered with integument, and indurated, it is best removed with the scissors. If it be an indurated mass made up of a congeries of small distended veins, it may be cured by injection, though it will be required in such a case that the needle be inserted at several points. The best treatment, however, for a case of the kind is the ligature. The hemorrhoidal tumor best suited to this method, and where the value of this kind of treatment is most marked, is such as are bladder-like in their form. In all cases of vesicular character, whether pediculated, or having a broad base, either flattened or projecting, the injection is the simplest, safest, and least painful method of treatment.

For the sake of those who have not seen my first communication in the COURIER (No. 33), I will repeat enough in this connection to make the mode of treatment intelligible.

Constipation of the bowels is the almost constant predisposing, as the use of drastic cathartics is commonly the exciting cause of the disease, and no treatment can be successful that does not embrace within its scope an assurance of one daily easy evacuation of the *lower bowel* till the patient is cured, and for a time thereafter.

Recent cases are quickly cured by keeping the bowels in a soluble condition, with dram doses of the sulphate of magnesia taken every morning before breakfast for a few days, and the use, once or twice a day, of the following suppository:

℞.—Iodoform, - - - - - ʒi
Balsam Peru, - - - - ʒii
Cocoa-butter and white wax, of each, ʒjss
Calcined magnesia, - - ʒj.

Incorporate the mass thoroughly, and divide into twelve suppositories. Insert one after each evacuation of the bowels, and oftener if needed. Instant relief from pain follows their introduction. If the bowels be already in a lax condition, as sometimes happens when an acute attack of hemorrhoids follows a fit of constipation, the laxative would of course be admitted; but the use of the suppositories would be none the less indicated, and their value would be much enhanced by the addition of opium.

Hemorrhoids of *long standing*, though benefited by the foregoing treatment, will rarely be cured in this way. It is in this class of cases, with the exceptions already noted, that the injection of a solution of nitrate of silver, one dram to the ounce of distilled water, proves a most efficient and safe remedy, and one to which patients who refuse to be "operated" on will submit without fear.

If the tumor, or tumors, be within the external sphincter, the patient should now be directed to strain and force them within reach. This, often the most difficult part of the procedure, is much aided by seating the patient over a vessel, or the finger may be thrust into the bowel to provoke tenesmus. If in spite of all this they remain inaccessible, the operation should be deferred till the effect of a cathartic dose of aloes, ten to fifteen grains, can be had.

The patient being placed on his side, and the tumors within reach, the little sacs are seized one by one with a forceps, and held, while with a hypodermic syringe from five to ten minims of the solution are injected into each, not stopping till all have been thus injected. Anesthesia may be used, but I have seldom had occasion for such resort. The suppositories already mentioned should now be used for four or five days, morning and evening, and may be inserted by the patient himself, if a nurse be not at hand.

To complete the cure, if the patient be troubled with constipation, the following pill may be used:

℞.—Compound extract colocynth, - grs. xx
Extract nux vomica, - - grs. xv
Extract belladonna, - - - grs. v

Divide into 20 pills (or capsules). One to be taken every evening on going to bed, till the constipation be cured. The object of this pill is to solicit *one consistent and normal evacuation of the bowel every day, at the same hour, and one only.* To insure this, the patient should have a fixed hour to go to stool, and steadfastly refrain from this at all other times.

The use of *carbolic acid* in a manner similar to the above has been quite common in the profession for some years past, and by empirics has been practiced and sold as a secret remedy. The partial failures and occasional accidents attending its use led the writer, three years ago, into a trial of nitrate of silver, and the result, within certain limitations, has been a most gratifying success. In no case out of about twenty thus treated during that period has there been a failure or any other bad result.

THE UNION OF DIVIDED NERVES AND THE RESTORATION OF THEIR FUNCTION.

By L. A. Merriam, M. D., Omaha, Neb.

THE round or flattened cords called nerves consist of numerous primitive fibers. Each primitive fiber consists of the axis cylinder of Purkinje as its essential structure, surrounded by the white substance of Schwann as the protecting envelope, and the whole enclosed in a structureless tubular membrane. Several of these tripartite fibers, enclosed in a tubular sheath, constitute a funiculus, while several funiculi collected into a larger bundle and bound together in a common membranous investment are called a fasciculus, and several of these fasciculi to-

gether enclosed in a sheath constitute the nerve. These various parts are still further bound together by the interlacing fibers of the neuroglia. The axis cylinder of Purkinje, or the central substance of the primitive fibers, is composed of gray matter, and is identical, so far as we know, with the neuroplasm of the cells; it is, in other words, a streak of differentiated protoplasm or neuroplasm, which has a fibrillar disposition of its granules. It is one-third the diameter of the primitive fiber, and one-ninth of its mass. These parts of a mature nerve, now so various in structure, quantity and function, are but differentiations from a homogeneous mass, wrought through the lapse of time by the environing conditions of its existence.

At an early period of the history of this formative mass every part responded feebly to every impression, and waves of molecular transformation passing through this substance wrought such changes in its intimate structure, that subsequent waves of like character would pass through with increasing facility. This fact may be seen and exemplified by the study of the development of the cœlenterata, especially the sponges and most of the acalephs, who have no nervous system whatever, and nothing answering to a nervous apparatus except in one variety, viz: the medusæ or jelly fish, and in these it is in a very rudimentary state of existence. But they all answer to external irritation, and the movements perceived are largely due to the influences of their environment. The explanation of this is, that as the protoplasm is not yet differentiated into neurine or nerve matter, so every part of the animal substance responds to the impression; hence the motions of and the movements throughout these animals. But like the human being, they are subject continually to environing influences, from the first moment of their organic life, up through the stages of development, maturity and decline. Waves of molecular transformation are continually passing through all living nervous structures. Every wind that blows, every variation in atmospheric temperature,

the varying pressure of the clothing and muscular movements, all objects of contact, sight, smell, hearing and taste, work unseen changes in the organism, and in the embryo nerve a line of discharge is established along which impressions are habitually transmitted, until by the constant repetition of such a process the fully formed nerve is at last developed. With this brief statement as to the development of the structure and function of nerves, we are prepared to understand how divided nerves unite ; in other words, how each end of a cut fiber finds its own, and axis cylinder becomes united to axis cylinder, and its function restored. Suppose it be the ulnar nerve divided by the knife in the forearm, and the ends brought accurately together as before. An influence above or below the section is transmitted along the ulnar nerve, but now only to the severed point; beyond this it does not go, the function is destroyed.

Nature begins the healing process by a greater or less degeneration of the medulla or white substance of Schwann, and also of the axis cylinder, whether the nerve be exsected, crushed or simply divided, both structures reverting towards their original undifferentiated condition, this occurring to a greater distance below the point of division than above, owing to the influence of the nervous central organ. The swelling of the ends of the nerves which takes place, is due to the formation and proliferation of young cells of a nearly homogeneous character, being, in fact, undifferentiated neuroplasm, similar in kind to that found in the lowest forms of animal life and in the early stages of the human embryo. The two ends of the nerve united by this protoplasmic mass convey to it from each direction waves of molecular transformation, to the influence of which it, as undifferentiated neuroplasm, feebly responds. The influence through the new formation is at first general and diffused, each axis cylinder of the opposite end being alike subject to the same molecular wave; but as the fiber that has been accustomed to the peculiar quality of the vibra-

tion sent, and is the best fitted to receive it, is the opposite fiber of the one sending, so the fellow fiber receives more readily the impression and becomes the line of least resistance, the route through the new formation changing as it develops from a general to a less irregular and less indefinite one, until, under the molding influences of a repetition of experiences, the effects become accumulated and organized, and a more and more easy communication established. Whether the nerve consists of one fiber or many matters not; the restoration of form and function is the same in principle, varying only with varying conditions, until in the course of a few days or weeks definite lines of communication are established between the opposite ends of each axis cylinder, and the development of the perfect nerve fiber is consummated and its function restored.

VIRTUES OF QUININE.

By G. M. Dewey, M. D., Keytesville, Mo.

[*Read before the Chariton Co. Medical Society, July 27th, 1882.*]

IF sulphate of quinine had been known in the palmy days of Greece and Rome, it would have been deified. While vain appeals were made to Mercury, Venus and Jupiter, Quinia would have stayed the malaria, and banished the fevers that decimated the suburbs of Rome. In the memory of the present generation, thousands perished annually from our autumnal fevers. The discovery of the bark saved the lives of thousands. Still many perished because the stomach could not retain enough of the bark to stay the fell fevers.

Fifty years ago our autumnal fevers were as fatal as pneumonia is to-day. It was then no evidence of unskillfulness in the physician, if he lost ten per cent. of his cases of bilious fever. Powdered bark or Carpenter's extract

was to be used in fevers, with the precaution not to give it until the fever was gone and the tongue clean, that is, not until nothing was needed.

In 1843, pernicious remittent fever was epidemic in Howard County, in the portion in which I lived, and pursued a somewhat different course from what this disease usually does.

The fever commenced as ordinary remittent fever; after running a few days, a cold stage would come, and on the following or second day another cold stage, and in the second cold stage the patient usually died. I knew six young men in the full vigor of manhood who died this way, in the month of October. I, myself, had the disease. I had a very high fever for seven days, and then had a cold stage; but by dint of good nursing I survived it, and had but one cold stage, although the fever lasted two weeks or more. I think I was the only one who had a cold stage and recovered.

I knew a physician who commenced practicing medicine at Elgin, Illinois. He had been taught that our autumnal fevers were caused by congestion of the liver and portal circle, and that calomel and aloes were the remedies to be relied on to relieve the engorgement. His first twenty patients nearly all died. The doctor was a conscientious man, and this result so discouraged him that he abandoned the profession.

Doctors were a long time in learning to give quinine, fever or no fever. Dr. Sappington did much to encourage the physicians of this vicinity to give quinine, regardless of exacerbations or remissions. It was found that his pills would stop a bilious fever, and that their virtue was in the quinine they contained. About this time Bell and Stocke's Practice of Medicine was published, in which the chapter on remittent fever closes thus:

"Neither the icy coldness, nor the burning heat, nor the ravings of delirium, should prevent us from giving this true curative agent in congestive fever, sulphate of quinine."

I will here relate an incident that occurred in my practice many years ago, to illustrate with what fear and trembling the doctors of those days adopted the practice of giving quinine in the exacerbation of our autumnal fevers.

In September, 1852, I was called to see a man aged about 50, at the foot of the Blue Mounds, in Livingston county. I arrived there about 3 A. M. Found that the patient had been sick five days with what I considered a bilious remittent fever. The friends said there had been no remissions that they could discover. A venerable and very dignified old doctor, who carried a cane and wore long hair, and had the visage in the portraits of Hippocrates, was the physician in attendance. The patient was somnolent, with a hot skin, frequent pulse, and a dry tongue, that looked like a cottonwood board that had lain in the rain a week. I thought there was no time to wait for the attending physician's arrival (he lived at some distance), so I gave at once ten grains of quinine, and repeated it every two hours until the third dose was taken, when my patient went into a profuse sweat and never had any more fever. A little quinine occasionally completed the cure in a few days.

About 10 o'clock this doctor of much apparent wisdom arrived. He was greatly astonished to find the patient sweating and free of the fever. I told him what I had done. He seemed thunder-struck, took a seat by the bedside, felt the pulse, compressed his lips, shook his head—

> "Drew in a breath, heaved forth a sigh,
> And said he thought the man would die."

This old fossil was giving the patient one grain of quinine and half a grain of blue mass every four hours. From that day to the present, now thirty years, I have invariably followed this practice, without the loss of a patient from any of these fevers. If the febrile excitement is high and the bowels are constipated, a calomel purge is indicated. When much nausea is present, I have found nothing so reliable

as a pill made of powdered opium; say a grain or two. To wait many hours for a remission is inexcusable folly.

It is often impossible in the incipiency to distinguish a remittent from a typhoid fever. A heavily coated tongue and bilious vomiting at the onset would be some evidence of the former. If quinine failed to bring about a remission in 24 hours, we should suspect that we had a case of typhoid fever, or there was some complication.

How quinine cures the diseases before mentioned we do not know. Many of the antidotes for poisons possess no reasonable explanation.

Dr. H. C. Wood, in his Therapeutics, page 75, edition of 1880, says: "Various theories have been brought forward to account for the wonderful power quinine has upon all forms of malarial disease; but as we know nothing of the nature of malaria, or of the method of its action, and as we are very partially informed as to the effect of quinine upon the healthy organism, it seems to me perfectly futile to endeavor to explain why it averts a paroxysm of intermittent."

From the fact that medicines that are capable of making powerful impressions on the nervous system will arrest an ague, we can reasonably infer that ague is a nervous disease, or at least that disorder of the nervous system is an important factor in its production, and that the specific poison malaria is but a creature of fancy.

If ague is produced by a specific ethereal poison, it has a multitude of antidotes, and antidotes that act very differently; such as quinine, arsenic, gelsemium, opium, alcohol, iodine, capsicum, boneset, cold-baths, spider-web, or filling the stomach with very hot tea, all of which probably act by impressing the nervous system and not antidotally.

Hydrastis and apiol produce a group of symptoms, or physiological effects similar to quinine, such as ringing in the ears, deafness, and vertigo; and the latter is a pretty efficient remedy for ague.

Joret and Homolle are quoted in the United State Dis-

pensatory as authority for saying it will cure 86 per cent. of the cases of intermittent fever. Migraine or sun-pain is an intermittent nervous disease, and is usually curable with quinine. No one supposes this disease is produced by an aerial poison, or that quinine cures it by its antidotal virtues, but by its impression on the nervous system.

If quinine cures ague by neutralizing a so-called malarial poison, how does it happen to return every seven, or fourteen, or twenty-one days? Are there some poisonous germs left that hatch every seven days?

I think change of temperature the most plausible theory of the cause of our autumnal fevers.

Usually these fevers do not make their appearance until the latter part of August, when the days are hot and the nights cold.

The present season the nights have been unusually cold for this time of the year, and ague is very rife a month sooner than usual.

Dr. Geo. A. Ward, in the *New York Medical Record* of July, writing from the mountains in Peru, South America, fifteen thousand feet high, says that those who expose themselves to night air will have ague. Surely there are no malarial vegetable decomposing materials there.

This doctor says he is in full accord with the article I wrote against the malarial origin of fevers, and published in the *New York Medical Record*, October, 1880; and as exposure to a heated atmosphere in the day and a cold one at night will produce ague on the Andes, we should abandon the vegetable decomposition theory.

Quinine is king in curing ague by its power in impressing the brain and nervous system.

If there be a poison called malaria, it is certainly of so ethereal a nature that we cannot protect ourselves from it. It can enter our apartments wherever air can enter.

The oft-repeated precautions given in the books, to keep indoors after sunset in the so-called malarial districts, are useless, unless there be some other agent at work in the production of this disease.

Darkness, moisture, and cold, are essential to the manufacture of this ethereal poison malaria.

The medical mind was never seized with a greater or more wide-spread delusion than that which environs it at the present time.

It seems strange to us that our forefathers for so many generations dilated the tract, and poured boiling oil into gunshot wounds, or that they believed calomel would make our livers act, or stop acting, as we might desire. Doctors don't rise up *en masse* out of an error like wild geese out of a lake. No wonder the more thinking portion of the laity have little faith in our skill, or the curative power of drugs, when the history of the world is that one generation of doctors always upsets the theory and practice of the preceding one.

We are just returning from mass for the repose of the dead portal circle, liver and calomel theory of our fathers. The requiem has hardly died on our ears when the pall-bearers are coming in sight who will bury malaria in a deeper grave. From present appearances Bacillus is the demon who has draped the world in all ages.

Too much praise cannot be given to sulphate of quinine in the cure of intermittent, remittent and congestive or pernicious intermittent fevers, and some intermittent neuralgias.

Its curative power in any other malady is very dubious.

Tradition and imbecility of observers are the causes of its useless and extravagant use in so many diseases in which it is deleterious.

I have seen doctors give quinine in typhoid fever day after day for four weeks, and because it failed to kill the patient they attributed the recovery to the quinine.

A patient has ten-fold the chance to recover from typhoid fever with no medicine, and no physician, than to be drugged with quinine, though administered by a physician of transatlantic observation, whose fame may be national or hemispherical, though the Roman alphabet should be dehetamized to tell his degrees and dubbings.

Clinical observation will bear us out in saying that quinine has never modified, abated, shortened, diminished, lessened, alleviated, aborted, or in any other way benefited a patient with typhoid fever.[1]

When portal congestion lost its grip on the medical mind, calomel lost its grip on our bodies. Thus will it be with the *mal*-administration of quinine when malaria ceases to dance before our amaurotic eyes.

I have lived my three-score years and ten. Still I expect to be a pall-bearer at the death of malaria.

OBSERVATIONS ON THE SUTURE, WITH A NEW SUTURE BUTTON.

By H. H. Clark, M. D., Danville, Ills.

[*Read by title and referred to Publication Committee of Tri-State Medical Society at Terre Haute, Sept., 1882.*]

A PRECONCEIVED theory of the action of a means to be used for a certain purpose tends to bias our judgment, and leads us to make false deductions from the experimental observations which we may make thereon. Hence, a limited number of successes should not be considered as proving its correctness, neither should a few failures condemn it as unsound; for, in its application, we may have omitted to carry out some one or more of the details which are absolutely essential to its success.

During the war, 1861-65, in consequence of the very unfavorable condition of the wounds of such men as were

(1) Some most careful observers and most skillful clinicians not only deny this, but assert that in the administration of large and frequent doses of quinine they have had results in the treatment of typhoid fever far more favorable than those secured under any other mode of treatment. We hope soon to present some observations of this sort made here in St. Louis during the last few months.—[Ed. Courier.

of necessity (immediately after an action) transported to a distant hospital, my attention was called to the mode of using the suture; and I was somewhat surprised at the wide difference in the practice of the various surgeons of the army. One placed the sutures deeply; another, superficially. One drew them close and hard upon the included tissue; another left them so slack that the edges of the wound were hardly approximated. That these extremes of adjustment should be followed by the same results to the suture seems improbable; yet such is the case, the only difference being the time occupied in its accomplishment. In all cases, every-thing else being equal, the deeply placed, lightly drawn suture was retained the greatest length of time. The causes for this are, I think, quite obvious. The strangulation of the tissues enclosed in the tightly drawn suture quickly sets up inflammatory processes, the tension is increased, ulceration rapidly follows, and the suture cuts its way out.

So far as I have observed, the ulcerative action induced by a suture is peculiar, in that it begins where the suture crosses the edges of the wound, extending back along its course to its emergence through the integument. Its progress is so rapid that in some cases a few hours suffice to destroy their efficiency in the treatment of the case. In fact, if retained, they increase the ulcerative action; the suppuration becomes profuse; recovery taking place only after a prolonged, hard struggle, in which life has been seriously jeopardized. Occasionally death ensues from the exhaustion induced. In view of these facts the surgeon removes them, and relies on adhesive straps and bandages, either of them being (when compared to the suture) a very imperfect agent in the closing of a wound.

Bearing the above pathological processes and conditions in mind, I have experimented with the various substances used for sutures, both to ascertain their relative value, and to find some means to avoid such early disastrous results to the surgeon's main reliance in the closing of wounds.

And from the foregoing observations and experiments I conclude that the following radical defects exist in the suture as at present used:

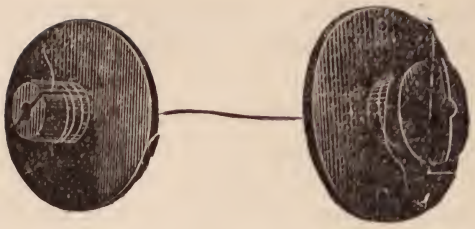
First. From a too superficial insertion it incloses an insufficient amount of tissue to render it as stable as it should be to fulfill the intention of the surgeon, viz., the coaptation of the parts till union has become firm.

Second. From being introduced into the immediate line of active inflammatory processes concerned in the repair of the parts; and from their small bearing surface, and being also foreign bodies, they act as irritants, and so increase these actions beyond the limits they would naturally go, and so aid in their own destruction.

Third. Being absolutely fixed upon themselves, we cannot change their relation to the tissues in which they are inserted. We must let them alone or entirely remove them.

In a lecture delivered in 1870, Prof. Geo. C. Blackman said: "All primary dressings of recent wounds should be as stable and non-irritant as possible." Does the suture as at present used comply with this teaching? I think not: to do so it must include more tissue; the pressure it exerts upon the integument must be distributed over a greater surface; and it must be so formed or constructed that its relation to the parts can be changed at the will of the surgeon, without endangering their integrity, or in anywise disturbing the process of repair—in short, be completely under the control of the surgeon, from first to last.

To meet the existing defects and fulfill the fundamental principle, as given by Prof. Blackman, I have devised and to-day present you a button, which if properly used will, I believe, give a suture that meets fully the demands in the premises.



t is made of vulcanite, highly polished, can be easily cleaned, is light, compact, strong, and being non-absorbent is antiseptic for all practical purposes. The specimen figured[1] is made with a round disk one inch across, with an upright stem or shank one-fourth inch high, perforated through its center, and saw slotted from top of shank to top of disk. This is only one of several forms, but embodies the principle common to all, the securing of the ends of the suture. They can be of various sizes as well as shapes, so as to meet the numerous purposes to which they can be applied. There is also in the large ones a perforation at each edge opposite the saw slot, to be used for the passage of additional sutures, the ends of which can be secured in the saw slot. To make a stable suture, and meet one of the defects noticed, it should be placed deep, and at a distance from the lips of the wound, when by placing a button upon each end a very firm hold is obtained, and also a relief from the pressure upon the integument—the thread which crosses from one button to its fellow resting upon the button instead of the integument, and so distributing the pressure over a broad surface. The sutures and button can be placed any desired distance from the wound, and bound across in every direction, either with the suture used, which should be quite long, or strips of adhesive plaster can be button-holed over them. Having provided for drainage, the sutures can be fastened, such pressure as may be necessary to accurately adapt the

(1) We are indebted for the use of this cut to the *Chicago Medical Journal and Examiner*, in which journal Dr. Clark first called the attention of the profession to his suture button.—[Ed. Courier.

edges applied, and then a collodion dressing put on, sealing the wound against atmospheric influences, and over this an antiseptic gauze. This is all the dressing I have applied for a number of years. The gauze is simply wrapped or laid on the part. By this course the surgeon can inspect in a moment, and can at once make such changes in his suture as may be necessary.

Their use as tractors upon muscles divided transversely is readily apparent. By using a long thread or wire, and wrapping the surplus upon the stems, we can in case of very great tumefaction slacken the pressure sufficiently to prevent their irritating and cutting through the tissues; and again, upon its subsidence, we can tighten them up as fast as required, and so retain their full benefit until their removal can be made without danger of the union giving way, and leaving a gaping wound to fill and heal by granulation. If desirable, the suture can be placed and the wound left open until all oozing has ceased and the surfaces become glazed, after which they may be unfastened, thus lessening the amount of exudation into any chance cavity and enhancing the probability of rapid union. If there should be a large accumulation of fluids, or a formation of pus, or a secondary hemorrhage before the adhesions are too firm to readily break up, and from these causes it should become necessary to open up the wound, the buttons can be removed, the wound opened, the sutures in its bottom pulled aside, the purposes of the surgeon accomplished, and the wound closed without the loss of a suture.

In ovariotomy, in perineorrhaphy, and in plastic operations generally, a wide field for their use presents.

By using wire, which I would recommend, and properly cross-binding them, no other dressing need be applied to sustain the parts—thereby admitting of the most perfect inspection from first to last, and easily permitting the use of antiseptic or any other application the surgeon's judgment dictates.

COPREMIA AS A COMPLICATION OF LABOR—ILLUSTRATED BY TWO CASES.

By W. M. McPheeters, M. D.

[*Read before the St. Louis Obstetrical and Gynecological Society, Sept. 21, '82.*]

MRS. M——, a healthy woman of active habits, was confined on the night of Jan. 24th, with her fourth child. Early in the morning of the same day—in anticipation of her approaching labor—she took of her own accord a dose of oil, which acted frequently and copiously during the day. Labor in all respects perfectly natural; placenta was removed without difficulty; lochial discharge abundant, and on the third day the secretion of milk was regularly established. She continued to do well, and was entirely comfortable, until the night of the 28th, when, according to her own statement and that of the nurse, she had three severe chills, followed by high fever, and frequent small, straining, painful operations from the bowels. Early the next morning I found her with a pulse of 110. Temperature, 103° F.; countenance anxious; constant desire to use the bed-pan; abdomen tender to the touch, but not tympanitic; stomach exceedingly irritable, rejecting everything, both in the shape of food and medicine. During the day she had as many as thirty small, dark fecal operations, attended with great pain and straining.

29th.—By the use of anodyne enemata and other remedies the bowels were somewhat quieted, but there was still a frequent inclination to stool; constant nausea and vomiting; a suppression of the lochia and of the milk secretion; pulse 120; temperature 102°; abdomen very tender, but only slightly distended. For several days she continued in about the same condition, during which time she was also subject to frequent sinking spells, occasional rigors, and constant nausea, with a pulse varying from 100 to 120, and a temperature from 99° to 101°.

Feb. 1st, eight days after delivery, without the administration of any internal remedy, save very minute portions of dry calomel occasionally placed on the tongue, the bowels began to operate very profusely, but without pain, and continued for several hours, until she had passed an enormous amount of dark-colored, pasty, offensive fecal matter, mixed with numerous small scybala, after which all her unpleasant symptoms speedily subsided, the integrity of the stomach was restored, milk and the lochia reappeared, and in due time she made a good recovery.

Case 2.—Mrs. C——, a robust, healthy woman of rather nervous temperament, was delivered, Nov. 14th, of her second child. Labor perfectly natural, and for several days she progressed as favorably as could be desired. Bowels opened on the third day by means of an enema, by which time the milk also was established.

On the 19th, four days after delivery, without any premonition whatever, she was seized with a severe and protracted chill, followed by high fever and intense headache. I saw her soon afterwards. Bowels quiescent; abdomen tender, with considerable tympanites; pulse 110; temperature 100° F.; nausea, with occasional vomiting, and exceedingly restless.

Nov. 20.—Fever, headache and nausea continued, in addition to which she suffers with constant and excruciating pain in the rectum and in the uterine region, but without any discharge from the bowels. Pulse and temperature about the same as the day before; increased tenderness of the abdomen, and tympanites more marked.

Nov. 21.—Dysenteric symptoms set in with great violence, and she had frequent small, mucous and bloody operations, accompanied with great tormina and tenesmus. Administered eight grains of calomel and two grains of bicarbonate of soda, but without opium (to which drug in all its forms she was peculiarly obnoxious), from the effects of which the bowels were freely moved. During the day and night she had as many as a dozen painless operations,

some of which were enormously large, almost filling the bed-pan with dark, moderately consistent, bilious matter, unattended with straining. Following complete evacuation of the bowels, the fever, headache, nausea and other disagreeable symptoms subsided, and a complete convalescence was soon established.

I have purposely omitted a full detail of the symptoms, as well as the treatment of these cases, as it is not necessary to my present purpose—which is briefly to call attention to one of the complications of natural labor, resulting from a cause not generally suspected, and which, as it has many points of resemblance, may possibly be mistaken for pyemic, or septicemic poisoning. I refer to fecal accumulation which may occur as the result of the great pressure on the bowel—usually the colon—by the gravid uterus, during the latter months of pregnancy, giving rise to partial paralysis of the bowel, a necessary weakening of its propulsive power, and a consequent retention of fecal matter. amounting in some cases to almost complete impaction. There is no difficulty whatever in understanding the cause of this mechanical obstruction, nor of the paresis; neither can there be any doubt of the fact that in the long continued retention of fecal matter in the bowel the putrid gases so abundantly generated may be absorbed into the system, and give rise to blood poisoning with its accompanying symptoms. This I believe to be the history of the two cases above recorded. In neither case was there any cause to suspect unusual constipation; in fact special care had been taken to guard against this condition, and the lower bowel had been repeatedly and to all appearance thoroughly evacuated, and yet the sequel proved that these frequent movements had failed to reach the seat of obstruction. In both instances there was the initial chill, high fever, rapid pulse, suppressed lochia, and other symptoms usually attending puerperal fever, and in the outset I was of the opinion that I had encountered this formidable disease, either in the shape of a peritonitis, or

metritis ; but from the rapidity with which the apparently grave symptoms subsided, so soon as the bowels had completely unloaded themselves, and the source of systematic poisoning was removed, it is obvious that neither the uterus nor the peritoneum were in any wise involved.

Constipation, both in the pregnant and in the non-pregnant state, is so exceedingly common that we are apt to overlook its importance, or fail to appreciate the injurious consequences that sometimes result from it, and too often content ourselves with simply ordering the conventional cathartic, without a careful examination into the condition of the entire track of the alimentary canal. Many a supposed victim of malaria, as well as many a subject of typhoid fever, or other zymotic disease, erroneously attributed, it may be, to sewer gas, or soil-pipe poisoning (fruitful causes as these undoubtedly are), may well inquire whether or not the "bad air," which so injuriously affects them, is not after all generated within, rather than from sources exterior to the body, prominent among which is copremia or dung-poisoning.

In cases of fever following childbirth, I have long been in the habit of administering an eight or ten grain dose of calomel, followed, if necessary, by a dose of oil, or some other mild cathartic, in order to overcome any stasis in the upper bowel, caused by pressure or over distension during gestation ; and I have yet to see any cause to question the propriety of this practice, however much it may be condemned by some. Without, of course, claiming any special skill in the treatment of such cases, I may state that, with an average obstetric practice, I have during the past thirty years been so fortunate as to have lost only one parturient woman, and in that solitary case I was favored with the consultation and advice of the worthy president of this society.

ON THE ANATOMICAL AND PHYSIOLOGICAL DIFFERENCES BETWEEN THE WHITE AND NEGRO RACES, AND THE MODIFICATION OF DISEASES RESULTING THEREFROM.

By W. J. Burt, M. D., Austin, Tex., *Secretary of Texas State Med. Ass'cn.*

ETHNOLOGY is divided into two principal departments—the *scientific* and *historic.*

Under the former is comprised everything connected with the natural history of man and the fundamental laws of living organisms; under the latter, every fact in civil history which has any bearing upon the question of races, their moral or physical peculiarities, or the *interblending* of the primary divisions of the human family.

The origin of the varieties of the human races is not connected by any natural or logical necessity with their original unity. The fact of their original unity may be infallibly certain, while the time and circumstances are enveloped in mystery; for no fact in the natural world is more inexplicable than the diversity of form and color in the human race.

This article, however, only contemplates giving some of the more marked characteristic differences between the negro and white races.

The question at once arises, Have the negro and Caucasian descended from the same parents? I answer that history fails to prove to the contrary, but demonstrates clearly that man is everywhere the one identical species. Profane and sacred history trace up all the nations of the earth, like streams, to a common fountain and place; that fountain is the family of Noah. I am aware that a few "so-called scientists" have spent much time in trying to refute this statement, and have developed much ingenuity and sophistry in their efforts. But without going into details, when the question is brought down to its last analysis, the origin

of the negro is from one of four sources: 1st, he is a *new creation* since the flood. 2nd, he has been *changed by climate and circumstances.* 3rd, he is *developed* from *lower organisms;* or, 4th, he is the result of God's *direct interposition.* Without any argument, we believe no sane man now accepts the first reason, for neither history nor tradition gives an account of any creation since the flood. God had finished his work sixteen centuries before it.

Has climate produced the change?

Carefully peruse Egyptian, Chaldean, Assyrian and Grecian histories, and search the traditions of remotest antiquity with her symbolic languages; and climate, with all her intrinsic and potential forces, has never produced this fundamental change in even one authenticated case.

It is but reasonable to suppose, if climate had anything to do in changing the Caucasian into the negro in remote ages, it would continue to do so, out of such *abundant* material and under such *favorable* influences.

But history and observation fail to inform us of such changes now; climate and the sun's rays may have produced a diversity of color, but it is not possible to attribute the *thick lips,* projecting *os calcis* and peculiar *conformation* of the *cranium* and *pelvis* to these influences.

The recondite causes of race, culture, moral influence and climate, all combined, have utterly failed to develop the negro and give him that capacity for philosophic disquisition and seductive eloquence which place the white man above all other created intelligences. Observation and history give a positive denial to the statement that climate has or can change the anatomy and physical qualities of man.

Has the negro been *developed from lower organisms?*

Professors Tyndall, Huxley & Co., by their development theory, say that he has been evolved and developed by some intrinsic or extrinsic force to his present existence, from generic elements.

But these gentlemen have failed to *prove* by any facts

that species are *convertible*, and that nature has powers sufficiently strong to change the generic elements and forces of the ova of one order of animals into another. They have not been able to produce a monkey, much less a man, from this prolific protoplasm.

Then if the negro is not a *new creation* since the flood, and has not been developed by *climate*, or evolved from *protoplasm*, it follows that there is but one solution to the question—that this change in color and conformation was *caused* by *God's direct interposition* in the family of Noah. It is no more unreasonable to believe that God interposed, contrary to natural laws, to produce this change, just after the flood, to carry out His purposes in giving a name and a people adapted to all portions of the earth, than that He caused a flood to cover the loftiest mountains, which destroyed all living beings except those in the ark.

This was God's direct interposition, contrary to the laws of nature. It is clearly shown by mathematical computation, if all the waters on the earth and in it, and if all the vapor that surrounds it, were condensed, the whole combined would not be enough water to produce such a flood. Yet the statement of Moses is accepted as true, and no man dares question it.

Whilst animals are of distinct species in the different zoological provinces to which they belong, man, notwithstanding the diversity of races, constitutes one species over the whole earth. In this respect, man appears an exception, as a being in this creation, of which he is, at the same time, the object and the end. It is therefore evident that the white and negro belong to the same species, but different races; and that they have marked anatomical peculiarities that have existed through the centuries since the flood; and what the negro was in his essential attributes in the plains of Shinar, or the valley of the Nile, he is in rare perfection to-day.

What, then, are these differences in the two races? for there is a just and geometrical arrangement and proportion

of the several part of the body of the two races to their several destinations, offices and functions. The physical outlines of the negro differ from the white, in his *wide, flat* nose, *flattened* temples, protruding under-jaw, *wedge-shaped* pelvis, *flat, sponky* feet, projecting *os calcis*, small *gastrocnemii*, *convex tibia*, longer arms as compared with the legs, *woolly* hair, narrow *waist*, *widened* chest, pouting *lips* and black skin. Dr. Samuel P. Logan, in his osteological admeasurements of the bones of the upper and lower extremities of the two races, gives an anatomical difference which cannot possibly be influenced by external agencies. He says, the relative length of the bones of the extremities and the relation between their proximal and distal segments are characteristic. For example, the *humerus* is relatively to the *radius* nearly *one inch* longer, and the *femur* is relatively to the *tibia* nearly *one and one-half inches* longer in the white man than in the negro ; or to express it differently, in the white man the *humerus* is nearly *four inches* longer than the *radius*, while in the negro it is less than *three inches*; and the *femur* is nearly *four inches* longer than the tibia in the white, and is only about *two and a half inches* longer in the negro. Another fact, developed by these measurements, is, that in the white race the *fibula* is longer than the *tibia*, while in the negro it is shorter.

These instructive admeasurements give us this scientific fact: that the length of the tibia, compared to the length of the femur and tibia combined, averages about 43 per cent in the white and 46 in the negro. And that the length of the radius, compared to the length of the humerus and radius combined, is about 40 per cent in the white and 43 in the black. So that with two of the long bones of either extremity we can pretty clearly designate the race to which they belong. This greater length of the bones of the distal segments, as compared with the proximate, is a condition analogous to that found in animals next below man in the zoological scale.

Dr. A. McDowell, during the recent war, made frequent *post-mortem* examinations on the bodies of white and colored troops. He tells us that, while the chest measurements in the negro were full, up to the army requirements, he found the *lungs* always *lighter* in weight and smaller in cubic area than in the same sized chest of the white; again, that a most marked difference existed between the size of the *liver* and *spleen*—the *liver* was comparatively *larger*, while the *spleen* was much *smaller*, in the negro. May we not, on this fact, base the reason why the negro is less susceptible to *malarial diseases*?

The chief and most important anatomical distinction exists in the *cranium* and *brain*. The Caucasian skull is of an *oval* or *elliptical* shape, with no excessive prominences and of a symmetrical form; while the negro's skull is of an *oblong*, *compressed* form, *flattened* laterally, with the temporal muscles rising high on the parietal bones, and the cranial bones are *harder*, *thicker* and *stronger*. The prognathous skull is remarkable for the large development of the parts connected with the organs of smell. The nasal aperture is broad, allowing a larger surface for the distribution of the olfactory nerves; hence their sense of smell is more acute. Dr. S. G. Morton has examined critically over six hundred crania of the two races, and has probably the largest collection in the world. He speaks therefore authoritatively. He says, "the *condyloid processes* of the occipital bone, in the negro, are divided generally by a transverse groove into two distinct articular plates," and gives this as an evidence of their inferiority and, by analogy, nearer relation to the lower animals.

Another interesting fact is the position of the *foramen magnum*. In the negro it is *further back* in the occipital bone, and with a *less projection* of the bone. Dr. Morton took great pains to ascertain the absolute and relative capacity of the crania of the two races. He places the average capacity of the cranium of the white man at 92 cubic inches, the average capacity of the negro at 83 cubic

inches, and the higher order of the orang-outang and chimpanzee at from 16 to 24 cubic inches. This difference in cranial capacity of the two races amounts to 9 cubic inches, while between the negro and higher chimpanzees is the astonishing amount of 59 cubic inches, which should forever put at rest the *near* relationship of negro and orang-outang.

If a line be drawn from the articulating surfaces of the occipital condyles, along the floor of the nostrils, and intersecting another line touching the most prominent parts of the forehead and superior maxillary bone, this included angle is called the facial angle. This facial angle is said to be the typical expression or exponent of the relative strength of the physical and mental forces.

Taking this statement to be true, we learn that the facial angle in the Caucasian is about eight degrees larger than in the negro, and as a consequent fact the brain of the negro is about one-eighth less in size, weight and superficial area. From these data we draw three important deductions:

1st. That the size and weight of the brain will be found to increase with the facial angle.

2nd. The facial angle increases in proportion to the expansion of the cranium, with a diminution of the facial bones.

3rd. The mental manifestation and power have a direct relation to the angle above indicated.

The negro has little elasticity of temperament; he lacks nervous endurance and moral courage, and it is believed that he is more profoundly impressed by shock than any race on the earth; consequently he holds up badly under all surgical operations, and gives a fearful mortality to such diseases as require nervous endurance and fortitude. I mention a few:

The statistics of disease and death of the white and colored troops during the recent war, compiled by Drs. Otis and Woodward, show 105 deaths per 1,000 colored troops

from disease, while the death rate for the same time of the white troops was only 55 per 1,000. In typhoid fever, 1 out of every 2.8 died of the white, and 1 out of every 1.7 of the colored troops.

In consumption, 1 in every $2\frac{1}{2}$ cases died among the whites—12 in 13 died among colored.

In pneumonia, 1 in 5 among whites, and 1 in 3 among colored.

It is a notorious fact that consumption runs a rapid course with the negro, and also constantly noted that girls and boys between 13 and 20 suffer in large proportion. The disease usually runs its course and carries off its victim within six months. The mortality, particularly since the war, from consumption in our Southern States among the negroes is extremely large.

The fact that they live in a Southern and temperate climate, and their habits of industry, being *general out-of-door's work*, giving them abundant of fresh air, light and exercise, should give a smaller per cent. of cases and a less mortality, if they were not more susceptible, and if they had the same amount of vital resistance. This want of vital power and nervous endurance I presume results mainly from two causes—the *less lung capacity* and the *smaller size of brain* of the negro.

The post-mortems of Dr. McDowell prove the first, and Dr. Morton demonstrates the latter; and although the liver is *larger* in the negro, and assists the lungs to decarbonize the blood, yet it is negative in its results and powerless to give vital force and resistance. A necessary consequence of this low vital force and nervous energy, in practice, the negro cannot stand depletion, and must have stimulating and supporting treatment from the onset of diseases. The nature, constitution and peculiarities of the negro adapt him to the duties and work of a warm or hot climate, and unfit him for the cold, bleak winters of the North. He, bareheaded and naked, will sleep comfortably, as on a bed of roses, under a tropical sun that would kill a white

man. In cold countries, the negro withers and trembles in the blast, while the white man rejoices in the tempest and snow; but in hot climates, the former stretches forth his limbs, his eyes sparkle and his whole person becomes alive with activity and force, while the latter flies to the shade and faints with heat. Thus nature better enables the negro to resist the diseases and injurious influences endemic to hot climates. The white man hardly dares remain over night on the marshes and rice plantations along our southern coast, while the negro works, lives and sleeps with impunity.

It is noted that the negro is peculiarly exempt from yellow and malarial fevers. Even in the fatal form of hemorrhagic malarial fever, while I have seen a goodly number among the whites, I have never seen a negro suffer from it.

Without noticing other anatomical peculiarities, we close this article with the statement, that the great fault of human philosophy is its *haste* to unravel and explain, without waiting for the plodding researches of science; so that the immense extent of our ignorance, compared with our knowledge, has been only the more profoundly forced upon us, as discovery has advanced.

Tobacco Poisoning.—A child purchased a cake at one of the refreshment stands in Prospect Park, Brooklyn. After eating a portion of it he was taken with nausea and vomiting. A physician who was summoned declared that the child was suffering from tobacco poisoning, and on examination of the remainder of the cake tobacco was found scattered through it. —*Chic. Med. Rev.,* Aug. 15, '82.

Lectures on Dermatology.—We notice that Dr. Bulkley announces a sixth course of lectures on diseases of the skin, in the pathological amphitheatre of the New York Hospital. These lectures are free to practitioners and students of medicine.

CASES FROM PRACTICE.

PISTOL SHOT WOUND.—LIGATION OF CAROTID.

By John T. Hodgen, M. D.[1]

July 31st, 1880, Barney Murnaghan received a shot in the left side of the neck, from a 22 caliber Smith and Wesson pistol. The ball entered below the hyoid bone and near the end of its greater horn. He bled profusely from the mouth. I saw him an hour after. He was then pulseless, cold, perspiring freely and unable to speak. A few hours later he complained of intense pain in the right arm, stating that he had received a shot at that part. No wound could be observed. It was found that he had a flesh wound in the right thigh. Respiration becoming difficult on account of blood infiltrated about the larynx, it was supposed that tracheotomy might be required during the night. He received hypodermically one-fourth grain of morphia.

August 1st I found the breathing much better. The patient complained then of intense pain in the right arm. I found a swelling due to infiltration of the whole front of the neck, the skin coming out to a level with the collar bone and shortening the chin very greatly. Near the outer end of the right clavicle I found a small hard swelling, pressure upon which caused intense pain in the right arm. There was complete motor paralysis of left arm and leg. Sensibility was not impaired. The pupil of the left side was widely dilated. Both pupils responded to light. Vision was indistinct when both eyes were used, more distinct when one eye was closed. From the phenomena presented, together with the history of the accident, it was concluded that the bullet had passed through the pharynx, injuring the right carotid artery in its course, and lodging near or upon the axillary plexus of the right side. The patient continued to improve in general condition, still complaining of pains in the right arm, and paralysis gradually improving in the left foot

[1] Prepared for publication in the Courier just before Dr. Hodgen's death.

and arm, until the 13th of August. At this time a swelling about the size of a walnut made its appearance in the region of the right carotid artery, with marked pulsation, distinct thrill and a very audible, increasing murmur. The tumor was larger on the 14th, and by the 15th it reached the size of an orange. On this date, assisted by Drs. Mudd, Parrish, Jenks, McCandless, Love, and a number of medical students, I operated as follows: I made an incision, about five inches long, along the inner border of the *sterno-cleido-mastoid* muscle, beginning above the middle of the neck, and extending to the upper end of the sternum, thence three inches outward along the upper border of the clavicle; severed the sternal extremity of the sterno-cleido-mastoid muscle, and turned that together with skin outward; this brought to view the sac, which was most thoroughly exposed. Having secured a good light by means of a reflector, the knife was passed into the tumor, followed immediately by the finger. Three or four ounces of clotted blood was discharged, and one gush of bright, fresh arterial blood, before the finger was placed upon the opening in the vessel. Dr. Mudd enlarged the opening of the sac at the upper part, exposed the artery immediately above the finger, and passed a ligature about it. The finger was then drawn a little downward, and the artery opening into the sac below was discovered. It was found that the bullet had passed completely through the artery, making two openings. Dr. Mudd passed another ligature around the artery below and secured it. During the whole operation, not more than one ounce of blood besides the clot was lost. The patient progressed favorably, the movements of the left arm and leg daily improved, until by the 1st of September he was enabled to move about the room, but was much enfeebled. The general health gradually improved until the 14th of October, at which time, while on the street, the wound not yet perfectly closed though nearly so, his attention was attracted by some one in an upper window and he turned his head suddenly, felt a stinging pain at the site of the wound, and going home found it was bleeding a little. During that evening there was a more free hemorrhage. Dr. Parrish was called, and applied cloths moistened with persulphate of iron, and thus controlled the hemorrhage without difficulty. When I saw him an hour later, I found him feeble, anxious, nervous, with a

marked pulsation in the right side of the neck about the middle of the clavicle, and without any increased fulness. Thrill could be distinctly felt, and a murmur could be heard along the whole course of the subclavian and axillary arteries of the right side, as also upon the left.

On the 15th a careful examination was made. It was thought probable that the blood came from a rupture of the weak new tissue and not directly from any large vessel.

On the 20th a dry crust was removed, and only a small granulating surface remained. At a careful examination made at this time, it was learned that there was no pulsation at the site of the ligation of the carotid, but it was distinct over the subclavian and in the region above it; thrill was still present and the murmur distinct. The patient progressed favorably until the 24th, when another slight hemorrhage occurred at night. This was checked by the application of flour. Removing the flour I found a very small opening without clot in it. On the 25th of October, although the left arm and leg were weak, the movements seemed perfect. The left pupil was still somewhat dilated, though not so much as in the beginning.

This case is of especial interest on account of the paralysis of the left arm and leg following an injury of the right carotid artery. The little oozing from the neck continued up to the 15th of November, when he was attacked by inflammation of the tonsils with high fever, and soon swelling at the site of the cut for the ligation of the artery made its appearance. This increased until the side of the neck was level with the jaw and the clavicle, and was considerably reddened. On the 24th the wound opened afresh, and discharged pus freely, temperature subsided, swelling disappeared.

December 5th Murnaghan had a sore throat and had some fever, complained of heat and swelling about the right side of his neck.

December 6th, swelling has increased. December 8th, the wound opened, discharged some bloody pus; swelling subsided. In the evening at 8 o'clock had a hemorrhage, which was controlled by pressure after continuing an hour, during which he lost about two ounces of blood. December 9th, no more hemorrhage; wound discharged bloody pus; left pupil still about double the size of the right; complains frequently of pain

in the right arm, elbow and hand. The collection of pus seemed to be toward the outer part of the neck above the clavicle, and was probably occasioned by the presence of the bullet.

Saw him February 18th, 1881—left arm and left leg both atrophied—left pupil is about double the size of the right, responds to light. Vision seems good in either eye. Movements of the arm and leg tardy and feeble, though he has considerable power in his grip. Movements of the leg require especial attention, has no power to flex or extend the toes or the foot; has had no pain about the right shoulder for some months; wound is entirely closed.

December 29th, 1881. Barney Murnaghan has occasional pains in elbow and the right pectoral region. The pupil of the left eye is larger than the right, perhaps one-third. He sees better with either than with both eyes; letters are brighter when seen with left eye and better defined when seen with the right eye. The lid of the right eye droops, that of the left a little more widely open than normal. The muscles of the left side of the face are not so mobile as those of the right. Left arm and leg are both weak. He commands the arm pretty well. The anterior tibial muscles are almost completely paralyzed, so that the foot swings as if the peroneal nerve had been cut, indeed in walking the whole leg swings from the hip. Arm and leg are both wasted. The general health is good, and nothing but the occasional pain in the right elbow and right pectoral region indicates the presence of the ball on the right axillary plexus. Both pupils are mobile, the left less than the right.

From the foregoing history, it will be apparent that, soon after the wounding of the right carotid artery, a clot formed at the site of the wound, which cut off the circulation through that artery, or that a clot which formed at that time or place became detached, and was arrested in the middle cerebral artery on the day after the injury. Soon after the injury it was not observed whether the left arm and leg were paralyzed. The critical condition of the patient suggested extreme quiet; but it must be added that those who removed the patient from his stable, where he was injured, to his house, believe that the left arm and leg could be moved several hours after injury. This being accepted as true, the thought is suggested, that a track through the clot at the point of injury in the artery had remained free,

so that the blood still found its way through the right carotid, and that later, perhaps during the night of the 31st of July, and the 1st of August, the clot at the site of the wound was prolonged into the artery, was swept away and plugged the middle cerebral artery, thus cutting off the supply of blood from the upper part of the ascending parietal convolution, which controls the motions of the superior and inferior limbs. This assumption of the site of plugging would, however, hardly suffice to explain the disturbance of the pupil of the left eye.

TREPHINING FOR DISEASE OF THE FRONTAL SINUS.

By William A. Byrd, M. D., Quincy, Ill.

(Read before the Tri-State Medical Society at Terre Haute.)

I have selected this subject for the consideration of this society, on account of the paucity of the reports on it when searched for in the literature that the general practitioner has access to.

Mrs. Frederick Steffen, a married lady aged 35, of Steffensville, Missouri, was brought to consult me by Dr. Charles Vincent, of that town, June 26th, 1880. She had been suffering with what had been variously denominated frontal neuralgia, or nasal catarrh, for fifteen years; at times the pain in the frontal region would be so intense as to require large doses of morphine to allay it. At these times the skin over the frontal sinus would become edematous and red, and in a few days a very fetid discharge would take place from the nose. Upon the occurrence of the discharge, the pain would cease, to be again renewed at an uncertain, but not a distant time; this edematous condition existed at the time she came to see me. From the history of the case, and the appearance of the patient, I decided that there was an inflammation of the lining membrane of the frontal sinus, the products of which inflammation becoming inspissated, and clogging up the openings into the superior nares, permitted an accumulation of pus, the pressure from which was

the cause of all the suffering and other distressing symptoms. Nature relieved this condition of affairs, by forcing an outlet into the nose, but that opening being too small was again readily occluded. To assist nature, I decided to make an opening into the frontal sinus from the front, and through that opening enlarge the openings into the nose. Accordingly the next morning, with the assistance of Drs. Vincent and Samuel Durant, I made a crucial incision over the frontal eminence, laying bare the bone. An opening was then made through the bone with a well-tempered scraper, such as is used by dentists in shaping rubber plates for artificial teeth. When the sinus was reached it was found full of a mass of very offensive material, white in color and of the consistency of cheese. This was scooped out with the scraper. Pieces of the ethmoid bone were found necrosed, and were also removed. A pair of thin-bladed dressing forceps were then passed down on either side of the vomer, and the thin bony plates that interposed, with their mucous membrane, were removed, leaving a free passage-way for any discharge from the frontal sinus. The wound was dressed with oakum and Peruvian balsam. The relief was so marked that in two or three days she went home, under the care of Dr. Vincent, who reports that she made a speedy and perfect recovery. The only satisfactory account that I have found of the diseases of the frontal sinus is contained in Cohen's work on Diseases of the Throat and Nasal Passages. In cases of abscess he recommends prompt opening, while for tumors he states: "Removal of solid tumors by direct access, by incision or trephine, or drill-saw through the anterior wall of the orbit, is justifiable if there be no symptoms indicating extension internally. Tumors of the latter class must be approached very cautiously, as it is impossible to determine to what extent the cranial bones or membranes may be involved."

The early recognition of tumors or other trouble in the frontal sinus, and the prompt removal by making an external opening with a trephine and enlarging the openings into the superior nares will, in many instances, relieve the patient of years of suffering, and perhaps prevent death from invasion of the cerebral vault.

A CASE OF RUPTURE OF THE UTERUS.

By L. A. Merriam, M. D., Omaha, Neb.

Between the hours of 12 M. and 1 P. M., Sunday, April 10th, 1881, I was called by Mr. Michael Foley to see his wife, a short, thick set, close built woman of 38 years, now pregnant for the twelfth time, who he said had been in hard labor since six o'clock that morning. Her former labors had been easy and rapid, with quick recoveries. I found her in the care of two Irish women, who said, as did the woman herself, that the pains had been violent for the past two hours. A careful examination of the abdomen by palpation, as taught by Mundé (a procedure that should seldom be omitted by the accoucheur), showed a large and normal shaped abdomen, tender to the touch to the left of and a little below the umbilicus, which spot she said had been sore for a month, and was caused by a hurt while lifting a washtub full of clothes. Completing my external examination, and being in some doubt as to the position of the child, a digital examination per vaginam was made, disclosing a dilated os of two and one-half inches in diameter, a rupture of the amniotic sac and a draining away of the waters, as the condition of the bed plainly testified; and my doubts as to the position of the child were set aside by finding a breech presentation with child in right dorso-posterior position, the breech in left-oblique diameter, the right trochanter of the child being forwards. Add to this a long prolapsus funis with very weak pulsation, and the description is complete.

Recognizing the danger to the child from the breech presentation, the long prolapsus funis, its weak pulsation, the absence of waters, the unusual position of the child, and a compact pelvis, not suspecting any danger to the mother, I made an unsuccessful attempt to replace the funis by position and taxis. Closely following this irritation of the os uteri, came a severe pain, very violent in character. During the pain, which seemed to be to very little purpose, the woman cried out with great distress, locating it on the left side of the abdomen, in the before mentioned sore spot. I heard no sound, and having no idea of the nature of the trouble, proceeded at once to cleanse my hands of meconium et cetera, and to examine the

painful spot and also the whole abdomen, when the terrible condition flashed across my mind, for near the alleged sore spot was the foot of the child too plainly felt through the abdominal parietes. I at once made examination per vaginam, finding fresh blood present, and the child ascended beyond reach of my finger, the cord still feebly pulsating. The absence of any further pain, the pallid countenance and variable pulse so rapidly supervening, told of internal hemorrhage, and that no time should be wasted. Hastily summoning another physician, I decided to deliver by podalic version, since only one foot was through the rent in the uterus, thinking I might save the child, and also give the mother the best chance to live. The physician summoned was soon on hand, to whom I stated the case and received his sanction as to the course to be pursued. Ordering a teaspoonful of fluid extract of ergot to be given the patient (with a little brandy), that its action might be manifested after the delivery of the child, I introduced the right hand, and without a great deal of trouble succeeded in getting hold of both feet, it being the right foot which was through the rent in the uterus. To remove the foot, turn and deliver the child, was very difficult, owing to the compactness of the parts and the large size of the child, which was a well formed male of twelve and one-quarter pounds. The child was still-born. An easy and rapid manual delivery of the placenta followed, after which I proceeded to examine the uterus by bimanual palpation, my right hand internally, and left externally. A large fold of omentum and some of the small intestines had passed through the rent, and the omentum was protruding from the vulva. The rupture was large, and permitted the passage of the hand readily, and extended from near the fundus to the utero-vaginal junction. The wall of the uterus, at the place of the rupture, was not more than one fourth as thick as on the right side. I replaced the intestines and omentum, and by irritation within, and pressure without, endeavored to contract the uterus and stop the hemorrhage. While we were discussing the advisability of a Porro operation as the only and last hope, I could plainly see the patient was rapidly sinking, and I proceeded to tampon the vagina to prevent further external hemorrhage, and resigned her to the care of her spiritual adviser at 3 o'clock P.M., her death occurring at 4:30 P.M. As no ergot had been given prior

to the time of rupture, and no external injury during confinement, the gentlest palpation only being employed at the time of my examination, I considered the cause to have been an abnormal thinning of the uterus on the left side where the sore spot had been, and where perhaps there had been an inflammation with softening of the tissues. Of this however I am not assured, as no autopsy was permitted. That the pains were severe, and aggravated by the slight irritation of the cervix while attempting to replace the funis, there can be no doubt, while the drainage away of the waters and breech presentation, unusual position and large size of the child, all contributed to hasten the terrible accident. The shock to the patient and the hemorrhage were so sudden and severe, that no opportunity was given to prepare the necessary instruments for a laparotomy, or a modification of Porro's operation as recommended by Mueller; and even if there had been time, I doubt if the friends would have permitted it.

To Render Gallic Acid Soluble.—Dr. McKent states that twenty grains of citrate of potash will effect the solution of fifteen grains of gallic acid in one ounce of water.—*Md. Med. Jour.,* Aug. 15, 1882.

Medical Literature.—"To keep up with the times" he must perforce wade daily through no end of meaningless magazine literature, and must necessarily pore over seriatim those ephemeral "works" which in nine cases out of ten appear to be published for no other purpose than to herald abroad the "genius" of some particular individual. There seems to be no conceivable form of extravagance that has not got its specious advocate; and every advocate, to express his peculiar views, must forsooth write a pretentious volume or two, which had better be expressed in as many pages. The more general vice, however, is the garbling and distorting of ideas long since well expressed and published, or the attenuating and re-echoing fallacies long exploded. The result of all this is that the conscientious and diligent student of medicine has to undergo an insufferable amount of valuable labor in order to glean a few grains from the superabundant chaff.—C. F. Buckley. B. A., M.D., in *Cerebral* Hyperemia, pp. 1–2.

EDITORIAL.

COUNTING A RAPID PULSE.

The ability to recognize the characteristics of the pulse is most important, both for diagnosis and prognosis. The information gained through its proper interpretation is not sufficiently appreciated, and cannot be too highly estimated; for though it does not tell us everything, yet it does tell us much. Too often the practitioner, while sagely resting his finger on the wrist, and while the patient's friends hang expectantly on his opinion, does not read aright, nor read one-half he might. We have been surprised at the inability of reputable examiners of life insurance companies to properly recognize and describe the pulse of applicants; and an investigation of the records of any one medical examiner will show a remarkable similarity of description in all his reports, and an apparent inability to ascertain and state the nice points of distinction. We could wish that medical teachers would train their students to thoroughly know and interpret the pulse.

At the present time we desire to call attention to only one characteristic of the pulse, namely, the limit of frequency which can accurately be counted.

Authors have taught that 140 beats per minute was that limit, and we had so believed until recently, when Dr. A. W. Abbott, of Minneapolis, showed us the inaccuracy of such statement, and practically demonstrated that double that number can be readily recorded.

The trouble has been, not that the brain failed to recognize the very frequent arterial impulse imparted to the finger, but that it could not articulate with sufficient rapidity the numbers

of the beats. We do very well with the numerals of one syllable, as up to ten and twelve, but with those of two syllables, as of the teens, and further on of the compounds, as twenty-two, etc., we cannot think of or articulate rapidly enough. By confining the count to the ten numerals, and repeating them as often as necessary, keeping record of each ten on the finger, we do far better—320 to the minute is actually recorded in this way. One may readily illustrate it by counting the ticking of his watch.

The plan, however, suggested by Dr. Abbott is to make, with a lead pencil, dots upon a sheet of paper synchronous with the heart beat for a definite period, say quarter of a minute. Afterwards count the dots, and calculate for the whole minute. The doctor states, in the *Medical Record* of Aug. 12, that he first adopted this method in 1870, while experimenting upon the action of alcohol on birds, in which the heart beats (numbering over 240 per minute) could not be estimated by the ordinary method. "A pulse of 400 could be taken in this way, provided each pulsation were distinct enough to be discriminated by the touch." And he remarked to us that he did on one occasion so count a pulse of such frequency (400). S.

AURAL DISEASE AS AFFECTING INSURABILITY.

Dr. Laurence Turnbull prepared a paper to be read before the American Medical Association, which by a mistake in mailing failed to reach its destination. This was published in the *Virginia Medical Monthly* of September.

He calls attention to the effect upon a man's expectation of life of deafness and of diseases of the ear. Accidents are more likely to occur to a man who is deaf than to one who has normal hearing, as he does not receive warning of approaching danger as early nor as surely as the latter.

Where acute or chronic disease of the ear exists, there is danger of the disease extending to the brain with fatal results.

In conclusion, after giving a number of illustrative cases, he recommends that insurance companies and orders introduce into their forms for applications for life insurance the following questions, to be answered by the applicant:

1. Are you suffering from any form of disease of the ears?

2. Have you pain, noises, dizziness, or any discharge from the ear?

3. Are you at all deaf?

He would have the following questions answered by the examining physician, who should also be expected to make careful examination of the ears, as well as of the thorax and abdomen:

(a.) What influence has the disease of the ears upon the life of the individual?

(b.) Has the disease of the ears any tendency to influence any local or general affection of the system of the individual?

(c.) Will the disease of the ears prevent the individual from following his ordinary occupation, or tend to prevent his earning a livelihood?

The subject is one of considerable importance, and should be given due consideration by the medical officers and examiners of all insurance companies and orders.

DOSAGE OF CERTAIN MEDICINES AS ALTERATIVES.

To determine the best and pleasantest methods of administering medicines, and to adapt the doses to the condition of the patient and the effect to be produced, are among the most important and by no means the simplest or easiest ends to be secured by every practitioner.

A study upon the dosage of certain remedies to be used as

alteratives was read before the Philadelphia County Medical Society by Dr. E. T. Bruen, and published in the *Medical Times* of July 29.

He observes, that the effects of drugs are best secured by careful attention to the methods of administration, and that such attention will permit one to modify the size of the dose of many substances, and yet secure a positive physiological effect.

In speaking especially of alterative treatment, he discusses first the iodide of potassium, which he says acts most efficiently when the functional activity of the digestive apparatus is at a minimum, and when given largely diluted, as it thus enters the system as slowly as possible, becoming a part of the plasma of the tissues, and so acting as an alterative. He thinks that thus small doses produce a more decided effect than when used in any other way.

He administers the iodide in wafer (two grains per dose, once or twice a day), and follows with a pint of Vichy or other water. If no effect is produced, he increases the dose gradually to five grains, but finds in a vast majority of cases that two-grain doses so administered will produce all the alterative effect of fifteen-grain doses, and that five grains is a maximum alterative dose.

In syphilis and aneurism, he advises larger doses, but does not consider the action as being strictly alterative in those diseases. When given for the effect on the pulmonary mucous membrane too, doses of five to ten grains are more serviceable than small doses, as it is then given to increase secretion or act as an expectorant. As an alterative in chronic bronchitis, he finds the smaller dose the better, as also in chronic rheumatism and hepatic hypertrophy, etc.

With regard to calomel, while he admits the value of the ordinary doses in the majority of cases in which they are prescribed, yet he thinks that doses of the one-hundredth to the fiftieth of a grain are often more efficient when used to secure an

alterative effect. In a class of cases in which the action of the liver upon the albuminoids received from the digestive tract is imperfect, and the secretions of the digestive tract are imperfectly elaborated, a true alterative effect is desirable. Many cases of anemia, especially when associated with neurasthenia, and cases of so-called nervous dyspepsia, attended with the secretion of an abundant urine of low specific gravity, with vaso-motor disorder, headache, etc., are much benefited by the prior use of calomel, and these cases do not well tolerate iron tonics, unless some such alterative course be pursued first. In an opposite class of cases, where young women of full habit are much disturbed by violent headaches, this drug often renders more prompt relief than any other line of treatment.

So in speaking of strychnia and belladonna, when an alterative action is desirable, he recommends minute doses, commencing the administration of strychnia with doses of one two-hundreth of a grain, and giving three drops of the tincture of belladonna in a half glass of water daily.

BOOK REVIEWS AND NOTICES.

SORE THROAT. Its Nature, Varieties and Treatment. By PROSSER JAMES, M. D., etc. Fourth Edition, enlarged, with Colored Plates and Wood Engravings. *Philadelphia: P. Blakiston & Co.* 16mo.; pp. 318; paper, 75 cents.

This is one of the series of "physicians' handbooks" that are now being published by this house in cheap form, so as to place the best English works within the reach of all. Dr. James is a well known writer, and former editions of his work have had an extensive sale. There are many points in this work that will be helpful to the general practitioner on the treatment of these common ailments, and it will be read with profit, though we do not think that a thoroughly wide-awake man will be satisfied with this as his only book on this class of diseases.

TRANSACTIONS MISSISSIPPI STATE MEDICAL ASSOCIATION, at the Fifteenth Annual Session, held at Oxford, April 5th, 6th and 7th, 1882. Published by the Association.

The address of the president, Dr. B. F. Ward, is an able presentation of the facts in regard to alcohol as a dietetic and therapeutic agent. His delineation of the effects of alcohol upon the nervous system especially, and its influence in heredity, are graphic and telling. He opposes the use of alcohol as a therapeutical agent, believing that there are other drugs that far surpass it in all the various qualities for which it is recommended.

Dr. Kittrell, in a report upon new remedies, expresses a conviction that no new remedy of permanent value has been added to the materia medica during the last year.

The volume is noticeable for the considerable number of brief papers, no less than thirteen papers in addition to the report on surgery, which contains cases reported by nineteen different practitioners. A number of interesting items will be noted in our reports on progress, which we have collected for our readers.

THE PHYSICIAN HIMSELF, and what he should add to his scientific acquirements. By D. W. CATHELL, M. D., etc. Second Edition—carefully revised. *Baltimore: Cushings & Bailey.* 1882. 8vo.; pp. 203; cloth, $1.25.

We are glad to note that the sale of Dr. Cathell's little volume has been so rapid as to make necessary already the issue of a second edition. The make-up of the volume is improved by the division into chapters, and by the careful revision which the author has given it.

There is no other book that occupies the field taken up by this one, and many a practitioner, both young and old, will thank Dr. Cathell for the many useful hints that he gives which will aid to successful practice, and promote usefulness and popularity.

INDEX-CATALOGUE OF THE LIBRARY OF THE SURGEON-GENERAL'S OFFICE, U. S. ARMY. VOL. III. Cholecyanin—Dzondi. *Washington: Government Printing Office.* 1882. 4to.; pp. 1,020; cloth.

No extended notice of this volume is necessary or appropriate. As our readers know, it is a work for which we are indebted to Dr. Jno. S. Billings, Surg. U. S. A., whose clear judgment has planned, and whose indomitable perseverance is

carrying on the preparation of this index-catalogue of authors and subjects which, when finished, will be the most complete and valuable work of the kind in the world. The thanks of the profession are due to Dr. Billings for the work that he has so done, and to the U. S. Government for the execution of the work as so prepared by one of its officers. And right here we would call the attention of the profession to the necessity of urging upon our representatives at Washington the value and importance of this work, and the necessity of providing the necessary funds for its continuance and the publication, at as early a period as may be, of the remaining volumes of the series.

BOOKS AND PAMPHLETS RECEIVED.

Cerebral Hyperemia. Does it exist? By C. F. Buckley, B. A., M. D., etc. New York: G. P. Putnam's Sons. 1882. 16mo.; pp. 129. Cloth, $1.00. ———Mental Pathology and Therapeutics. By W. Griesinger, M. D., etc. Translated from the German (second edition). By C. Lockhart Robertson, M. D., Cantab, and James Rutherford, M. D., Edin. New York: Wm. Wood & Co. 1882. 8vo.; pp. 375. Cloth. (Wood's Library).———Diseases of the Rectum and Anus. By Chas. B. Kelsey, M. D. New York: Wm. Wood & Co. 1882. 8vo.; pp. 299. Cloth. (Wood's Library).———Stricture of the Rectum. Treated by Electrolysis. By Robert Newman, M. D. New York: Reprint from *New England Medical Monthly*. Sept. '82.———The Application of Pressure in Diseases of the Uterus, Ovaries and Peri-Uterine Structures. By T. H. Taliaferro, M. D., Atlanta, Ga. Reprint from *Atlanta Med. Register*. Sept., '82. ———Some of the Simple Methods of Performing Hystéro-Trachelorrhaphy. By O. E. Herrick, M. D. Rep. from *Obs. Gaz.* ———Annual Announcement of Toronto School of Medicine. '82-'83.——— The Antiseptic Treatment of Wounds after Operations and Injuries. By W. T. Briggs, M. D. Reprint from *Nashville Jour. of Med. and Surg.*———Life of John M. Briggs. By W. K. Bowling, M. D. Reprint from *Nash. Jour. of Med. and Surg.*———A System of Human Anatomy, including its Medical and Surgical Relations. By Harrison Allen, M. D., etc. Section I., Histology. Section II., Bones and Joints. 4to. square.———Speech and its Defects considered Physiologically, Pathologically, Historically and Remedially. By Sam'l O. L. Potter, M. A., M. D., etc. Lea Prize Thesis of Jefferson College. Philadelphia: P. Blakiston, Son & Co. 1882. 16mo.; pp. 114. Cloth, $1.00.———Sore Throat, its Nature, Varieties and Treatment. By Prosser James, M.D., etc. Fourth edition, enlarged, with colored plates and wood engravings. Philadelphia: P. Blakiston, Son & Co. 16mo.; pp. 318. Paper, 75 cents.——Index-Catalogue of the Library of the Surgeon-General's Office of the U. S. Army. Vol. III. Cholecyanin-Dzondi. Washington: Government Printing Office.———The Physician Himself and what he should Add to his Scientific Acquirements. By D. W. Cathell, M. D., etc., Baltimore, Md. The second edition. Baltimore, Md.: Cushings & Bailey. 8vo.; pp. 208. Cloth, $1.25.

TRANSLATIONS.

LARGE TUBERCLE OF THE HEART.

By H. Hirschsprung.

An 8 year old girl, suffering from pulmonary miliary tuberculosis, exhibited peculiar cardiac symptoms. There was a very tumultuous cardiac pulsation, which was diffused over the whole precardiac region. Dullness on percussion very marked, but not abnormally extensive. The heart sounds were dull, rythmic and distinct; but at the same time a sound was audible when relation to the other was not determinable, its character could be described as partaking of a frictional sound and rattle. Radial pulse was quiet and remarkably small. In the course of the sickness the heart's motion became less tumultuous; the sounds remained distinct; the dullness increased from the precardiac region over a large part of the left chest, so that finally it reached the second rib and anterior line of the axilla, but did not cross the edge of the sternum. The liver gradually enlarged and at last descended below the navel.

At the post-mortem examination of the heart the following was observed:

Heart in normal position and of almost normal size. Anterior wall of the left ventricle, very projecting and resistant. Larger and smaller miliary bodies about the apex of the pericardium, and on the left side of the anterior surface, specially along the vessels; a few in the internal coat of the art. pulmonalis. In the left ventricle a tumor the size of a large walnut, attached by a broad base at the spot where wall and septum unite; its chief mass projected into the cavity, so that its upper end was scarcely 2 ctm. from the right aortic valve. It was entirely covered with the endocardium. The ventricular

wall was somewhat dilated, but not thickened. Muscular tissue and valves healthy. Under the microscope the tuberculous nature of the tumor was evident.—*Centralblatt f. Med.* 1 *Wiss. No. 37,* 1882.

EXTIRPATION OF THE LARYNX AND PHARYNX.

(Surg. Clinic. Prof. Thiersch.) Landerer.

Cases.—1. Laryngeal carcinom in a man aged 36. Tracheotomy was made Sept. 27, 1879. Laryngotomy and partial extirpation of the carcinom, Feb. 3, 1880. Total extirpation of larynx, Feb. 26, 1880. Discharged from hospital with wound healed, Apr. 19, 1880. At the end of 18 months patient still well. 2. Laryngeal carcinom in a man aged 52. Tracheotomy performed Mar. 2, 1880; extirpation of the larynx, Apr. 15; cured. Patient remains well at the end of nearly 17 months. 3. Carcinom of both larynx and pharynx in a woman aged 45. Tracheotomy, Oct. 17, 1880. Extirpation of the larynx and pharynx, Nov. 10, 1880. Died of recurrence of growth, Mar. 16, 1881. 4. Carcinom of pharynx and larynx in a woman aged 57. Tracheotomy, Dec. 9, 1880. Extirpation, Jan. 17, 1881. Died Jan. 24, 1881, from secondary pneumonia; no infarcts nor metastases.

In these cases it appears that Thiersch precedes the operation for extirpation with that of tracheotomy. By this procedure time is gained for the strengthening of the patient suffering from insufficient supply of food and air; also to allay possible septic bronchitis; and, above all, there is gained the advantage of fixing firmly the trachea to the integument, and the closure of the anterior mediastinum against entrance of pus from the peritracheal inflammation. Much stress is also to be laid upon the wonting of the tracheal mucous membrane to the direct entrance of air, and to the irritation of the cannula, before the capital operation. It is evident that the opening of the trachea should be made as far below the isthmus of the thyroid gland as possible, that the fistula be not disturbed in the final operation. Thiersch follows closely in the extirpa-

tion the technique of Billroth and Gussenbauer; he prefers, when possible, to preserve the epiglottis. In the first and second cases, free escape of blood was encouraged by simple position, in the others the tampon cannula afforded better results. The wound was left open, no stitches. Patient was fed through an esophageal sound, which was introduced upon the operation table and fastened in the esophagus by an embracing ligature. By this arrangement the artificial feeding caused less inconvenience than would have been the case if the sound had been re-introduced at each meal. At the end of the second week the patients learned to swallow soft morsels, but to take liquids required much more time. To avoid the sinking of pus into the mediastinum and especially secondary pneumonia (which in 28 cases caused 9 out of 11 deaths), Thiersch recommends, for the first 6 or 8 days, such a position of the head that entrance of the trachea will form the highest part of the wound. Thiersch has chiefly made use of the artificial larynx of Gussenbauer and Bruns.—*Centralblatt f. Med. Wiss., No.* 38, 1882.

CASE OF MOVABLE LIVER.

Th. Schott.

A woman, 39 years old, had had seven easy deliveries. Abdomen very lax and dependent. Abdominal tumor having the form of the liver and easily replaced in the normal position of the liver. Tympanitic zone between the tumor and lung, also between it and the heart. Schott refers this displacement of the liver to diminished intra-abdominal pressure. Besides the effect upon the abdominal walls of the numerous births, there had been frequent attacks of diarrhea, alternating with obstinate constipation of several days duration; also, during the last lactation there was a remarkable increase in weight with subsequent general emaciation. By this last not only was the laxness of the abdominal walls increased, but the disappearance of fat within the abdomen also removed the necessary support of the liver. The liver was retained in position by a special bandage.—*Centralblatt Med. Wiss., No.* 37, 1882.

REPORTS ON PROGRESS.

SURGERY.

Hepatotomy.—Dr. Jos. Ransohoff reports a successful case of hepatotomy in a case of hepatic abscess where repeated aspirations and other treatment had failed. The incision was made with the thermo-cautery, and was five inches long, parallel to and two inches to the right of the median line. On opening the abdominal cavity there was found a fold of the great omentum interposed between the abdominal wall and the liver, which, though not adherent to the liver, could not be drawn aside. This was divided, and thus the surface of the liver was exposed and found normal in color and without a trace of adhesive inflammation. The liver was now attached to the wound in the abdominal wall by means of six silver wire sutures, two on each side and one at each end, thus leaving a surface of liver tissue exposed in the wound measuring one inch by three inches. An incision was now made into this surface by means of the cautery knife, dividing liver tissue, to a depth of about one-half inch. Three and one-half quarts of pus escaped from this incision, occasionally streaked with quantities of retained bile. Though the patient seemed now to be *in extremis*, injections of whisky revived her sufficiently to admit of completing the operation by washing out the abscess cavity with five per cent. carbolic acid solution, and inserting two drainage tubes.

During the after-treatment of the case continuous irrigation of the abscess cavity for several hours a day was practiced with excellent effect. Also after washing out the cavity a laryngoscopic mirror was introduced into the cavity, and its inner surface was examined by reflected light. In this way Dr. Ransohoff was enabled three times to remove sloughs that had gravitated to the floor of the cavity and were too heavy to be washed out by the current of water.

Six weeks after the operation the sutures were removed, and

the abscess cavity contained about one fluid ounce of fluid. Two weeks later there was only a sinus one inch in depth and this soon closed completely, leaving only a stellate cicatrix to indicate the site of the operation.—*N. Y. Med. Rec.*, Sept. 2, '82.

Cholelithectomy.—Dr. Jos. Ransohoff reports the following interesting case, in which an impacted gallstone was detected and the operation of cholelithectomy performed for the removal of the calculus:

The patient was seventy-six years of age and had been deeply jaundiced for six months, during which time he had lost fifty pounds in weight. He was very weak, his stools were like putty and his urine the color of tar. The liver was enlarged, its free border projecting two and one-half inches below the margin of the ribs. The gall bladder was distended and formed a smooth, globular and movable tumor about the size of the fist. There was moderate ascites.

The diagnosis rested between cancer and gall-stone. In favor of the former was the enlargement of the liver and the ascites. In favor of the gall-stone was the condition of the gall-bladder. Against both conditions was the total absence of pain. It was determined to explore the gall-bladder. Having fixed it by compression from below upward against the liver, a needle of a hypodermic syringe was introduced and a syringe full of thin, clear bile was withdrawn. On the following day a long, fine needle of a Dieulăfoy aspirator set was passed through the abdominal wall just below the gall-bladder, and gradually and slowly pushed on through that viscus as nearly as possible in the direction of the ductus communis choledochus. At the depth of four and three-fourth inches a stone was struck, thus establishing the diagnosis. A few days later an incision four inches in length was made over the gall-bladder, parallel to the median line and extending a little lower than the umbilicus. The gall-bladder was tapped with the hooded needle of an aspirator and eight ounces of light green fluid were withdrawn. With a finger in the abdomen the gall-bladder was readily traced to its termination in the cystic duct, where a firm concretion was readily detected. Three sutures were then passed, attaching the gall-bladder to the upper portion of the wound, and an incision a little over an inch long

was made. One large and two small calculi were then easily removed. Pressure from the outside by means of a finger in the abdominal cavity dislodged the calculus that obstructed the duct, and this also was easily removed, together with a fragment that was broken from it in the manipulations. The omentum and coil of intestine which had protruded were now thoroughly cleansed with carbolized water, the lower part of the gall-bladder was fastened by four sutures to the margin of the abdominal wound, and the latter was closed. A drainage tube was introduced into the opening of the gall-bladder, iodoform was dusted upon the surface of the wound, covered with absorbent cotton, and a bandage applied. The operation lasted an hour. One hour later he was perfectly conscious and free from pain. Eight hours later his condition was unchanged. Twelve hours later the cotton was so saturated with a greenish discharge that the dressing was changed; and from this time the patient gradually sank, dying twenty-six hours after the operation.—*N. Y. Med. Record*, Sept. 2, '82.

Warts removed by Arsenic.—Dr. Powell reported the disappearance of warts in a patient by the use twice a day of one drop of Fowler's solution.—*Ind. Med. Journ.*

MEDICINE.

Perforation of the Ileum by Worms.—T. J. Crofford relates the case of a colored child, aged 8 years, who died after an illness of one week's duration, having complained of a pain in right iliac region and having passed several round worms three days before death. On post-mortem examination two perforations of the ileum were found respectively twelve and twenty-four inches above the ileo-cecal valve. No evidence of inflammation of mucous membrane of the bowels, but marked peritonitis. A half pint of pus and two lumbricoid worms were found in the abdominal cavity. The conclusion was that the worms had perforated the walls of the intestine, and acting as foreign bodies in the abdominal cavity had set up a fatal peritonitis—*Transact. of Miss. State Med. Association.*

Senecio Lobatus in Rheumatism.—D. L. PHARES asserts that a tincture of senecio lobatus has gained considerable reputation in some parts of Mississippi as an anti-rheumatic remedy. The form of the disease to which it seems best adapted is where the pains are chiefly muscular.—*Transaction Miss. State Med. Association.*

Sulpho-Carbolate of Sodium as a Purgative.—RABUTEAU has recently been studying this drug and finds it a certain and agreeable purgative. It is a stable salt and does not decompose in the air or in aqueous solution.—*Med. News,* Aug. 26, '82.

Hot Water as an Anti-emetic.—DR. DOUGLAS MORTON says that he learned a number of years ago that no agent relieves nausea and vomiting so satisfactorily and promptly as water taken as hot as it can be drunk. He has classified the cases in which he has found it of value, as follows:

1. Cases in which nausea and vomiting occurred at the onset, or during the course of acute febrile disease.
2. Cases in which these symptoms were caused by overloading the stomach when its functions had been impaired by protracted disease.
3. Cases in which they were produced by nauseous medicines (not emetics) at the time they were taken.
4. Cases of acute gastritis caused by the ingestion of irritants.
5. Cases in which the symptoms were purely reflex.
6. Cases of chronic gastritis.
7. Cases of colic in newly-born infants.
8. Cases of flatulent distension of the stomach in adults.

He has found most beneficial results from using this in cases of cholera infantum, when it would often happen that hot water would be retained when everything else had been rejected, and would immediately render the stomach tolerant of food.

He attributes great value to this agent in the treatment of different forms of dyspepsia, as indicated in classes 6, 7 and 8. He orders hot water to be taken before each meal.—*Louisville Med. News*, Aug. 12, '82.

Cactus Grandiflora in Rheumatism.—HARVEY L. BYRD has used with great satisfaction to himself and his patients the fluid ex-

tract of cactus grandiflora in a number of cases of subacute and chronic rheumatism. He says that he has obtained better results from its action than from any other agent that he has used in these cases. He thinks it is likely to prove serviceable in acute cases also. He administers the fluid extract in doses of eight to twelve drops every three hours or oftener.—*Phil. Med. Times,* Aug, 26, '82.

Fumigation for Asthma.—W. M. WELCH suggests the following for relieving the paroxyms of asthma, as preferable to nitre paper or stramonium cigarettes, and combining the advantages of both stramonium and nitre:

℞.—Stramonii foliorum,	ʒx
Potassæ nitratis,	ʒv
Feniculi seminum,	ʒss
Sacchari,	ʒij

M. The stramonium leaves and the fennel seeds should be ground to a powder, not very fine, and passed through a sieve so as to remove the stems and coarse fragments. All the ingredients should then be rubbed together in a mortar without producing a fine powder. A small portion of the material is to be placed on a dish and ignited with a match. It should burn slowly and somewhat irregularly, and emit fumes which are to be inhaled.—*Med. Bulletin,* Aug., '82.

NEW YORK POLYCLINIC.—The demand for more, and more practical, clinical instruction, which becomes yearly more and more urgent, has led to the organization in New York City, by a number of prominent practitioners connected with various hospitals and dispensaries, of a polyclinic, following to some degree the plan of the famous institution in Vienna. Here, by utilizing the material which will be attracted to the dispensary established in immediate connection with the institution, as well as that in the various institutions attended by the several members of the large faculty, the classes, which will be divided into small sections, will have opportunity of being brought into direct relations with the patient, and acquire facility in examining and treating them which would be impracticable under other circumstances. The plan is similar in many respects to that proposed by the two schools for medical practitioners that have been organized in New York and St. Louis; and if well carried out, as it no doubt will be, there is no doubt of its achieving a fine success.

SOCIETY PROCEEDINGS.

ST. LOUIS OBSTETRICAL AND GYNECOLOGICAL SOCIETY.

Stated Meeting, Sept. 21st, 1882—Dr. G. M. B. Maughs, President, in the Chair.

Dr. McPheeters read a paper on Copremia, illustrated by two cases. (Vid. p. 412.)

Dr. G. A. Moses.—Some six or seven years ago I saw, with Dr. Papin, a case exceedingly analogous to these which the doctor has reported. The lady, a primipara, had been confined some three or four days before. She had had a natural labor, and did well until, I think, the third day, when she had a violent chill, followed by a high fever and other symptoms so serious as to alarm the attendants, and they got me to go and see her. The pulse was 130 perhaps, and the temperature 105.5°. Upon examining her, in the absence of all uterine symptoms, we concluded that she had no septicemia or peritonitis, but that the symptoms depended upon an overloaded condition of the bowels. We gave her a cathartic, and she had an abundant discharge of feces, and she never had another bad symptom.

Dr. S. G. Moses.—I expect that we have all met with cases of this kind. About forty years ago, when I commenced the practice of medicine in this city, I had a case exactly like these cases. It was the first case of the kind that I had ever seen, and it puzzled me a good deal. The patient had had a very good delivery; she was a very healthy woman. There was no trouble in regard to the confinement, but some two or three days after she was taken with fever, and the nurse told me that she had a dysentery. I found that the patient had a good deal of fever, a good deal of pain and a great deal of tenesmus, and I began to get scared. I saw her that morning and again

in the afternoon. The nurse told me that she had had 15 or 20 operations. I told her I wanted to look at the stool, as I smelt something very offensive, and concluded that it couldn't be dysentery. I found upon examination that it was composed of small fecal evacuations. I took the hint and gave her a good purgative, and in a few hours she was well.

I think these cases are quite common, and that they are often mistaken for dysentery. The bowel becomes filled with feces, the patient has an operation and a little fluid passes off; they deceive themselves, and imagine that the operation has been very free, whereas simply a little fluid has passed off, leaving the fecal masses behind. I have met with cases of great fecal impaction in non-pregnant cases. I recollect the case of a colored girl from whom I must have taken half a bushel. I never saw anything like it before. I couldn't use a spoon in this case, so I introduced my whole hand into the rectum and excavated out the mass, softening it down by repeated injections. The girl got well without any bad symptoms.

Dr. Boisliniere.—The doctor suggested that sewer gas was generated within. That is a new idea, and a very good one. It shows one thing. There seems to be a tendency to disregard the old methods. You see how the new writers are disposed to talk strongly against what is called the canonical purge on the third day. These book-knowledge men are very much opposed to this purge, which has been followed by our ancestors and which has been so beneficial. They act upon the idea that if you give a purgative, and empty the lymphatics, you may cause an absorption of poison; but, as Dr. McPheeters has observed, the presence of these masses is the source of poisonous gases which may enter the blood by the law of the diffusion of gases. There is no doubt that a person can have an operation of the bowels and be constipated at the same time. It is very deceptive. The patient says the bowels move very regularly. It may be so, and yet the bowel may be filled with large, dry masses, and a channel formed through them by which the secretion passes away, the impaction remaining behind. A case was recently reported in which a woman had dysentery or diarrhea, and was treated for that trouble, but not relieved. Finally she died; and at the post-mortem examination the colon was found to be distended until it was 27 inches in cir-

cumference and nine inches in diameter and about a foot and a half long, and filled with fecal matter. She had had frequent dysenteric passages, and it was supposed that the bowels were open. These cases are very deceptive. I am certainly in favor of the canonical purge three days after confinement.

Another thing that I am very much in favor of, and which I remember was used by Dr. Pallen, is, about eight or ten days before the woman is confined to give her a draught composed of salts and senna and cream of tartar, and then, afterwards, Hunyadi Janos water. This is of great value. It prevents eclampsia. We ought not to discard all the old traditions. Like the man who was lost in the woods, we had better go back to the starting point and begin over.

Dr. Montgomery.—I think it is very necessary to give a purgative after delivery. I remember nearly 30 years ago writing a short article, which was published in the *St. Louis Medical and Surgical Journal*, in which I called the attention of the profession to the importance of giving aperients in what we call septicemia or puerperal fever. We should not give drastics, of course. There was one case reported by Dr. McPheeters that seemed to me quite remarkable—the one in which the woman had taken a large dose of castor oil, and yet in three or four days she took a severe chill, followed by a dry skin, great nausea, suppression of the lochia, etc. Altogether, I should have set it down as a very bad case of septic poisoning. It was certainly very remarkable, considering that the patient had taken a purgative beforehand. In my country, senna, salts, coriander seeds, and very often juniper berries, form a very common purgative, particularly among country practitioners. It is a very excellent purgative; it acts upon the kidneys, and is a very thorough, cleansing purgative.

Dr. S. G. Moses.—I don't wish to be understood as indorsing any kind of empirical purging. I think that every case has to be treated on its own basis. I have seen cases where it was very judicious to give a purge on the third day, very necessary; but I don't think it is always necessary to interfere with the operations of nature if they go on naturally; the physician is only necessary to counteract evil, and enable the patient to follow out the dictates of nature and relieve her when there is sickness. If there is any disposition to eclampsia, it is well

enough to adopt that treatment. I want to put myself right as to my position. I don't believe in any empirical treatment of lying-in women. In case of fever, if it is necessary to diet the woman, let her be dieted. As to the suggestion that Dr. Montgomery makes, nine-tenths of the women would vomit their souls out if he gave them the remedy he speaks of, especially if they were delicate, I don't wish to be understood as favoring the administering of a purge on the third day in all cases. If I find it necessary to give a purge I do so, but I do not give oil in every case.

Dr. Coles.—It is often interesting to put our heads together and compare notes on very commonplace matters. The subject which Dr. McPheeters has brought up to-night is one in which there are some practical points which it is well enough to observe. I think where it is necessary to open the bowels it is always better to use some purgative than to rely upon enemata. Injections are the favorite practice of a great number of nurses, and of a good many ladies themselves. I think it is a too common practice. It has been run completely into the ground. They rely upon injections very frequently, and the results are extremely unsatisfactory. They pass the water and a few lumps of hard masses, and consider that they have gotten rid of the whole trouble, when, in fact, they have not reached the main seat of the difficulty. In the first place, there is a good deal in the manner in which the injection is given. Even if it is given carefully, and every precaution is taken to make it as thorough as possible, you are not certain that you will get anything like satisfactory results. I myself have in several instances found my patient not doing well, and have been informed by the nurse: "Oh, yes, doctor, her bowels moved freely;" but she probably did not mention the fact that an injection had been given, which caused a slight discharge from her bowels. So things go on, and the patient gets along from time to time: as you hear reports from her she is getting very well; and when you call and see her, you are surprised to find that the bowels have only been moved by a slight injection, given hastily and imperfectly, and that the bowels are still overloaded. I remember some years ago I came very near losing a patient by this very means. I had ordered a purgative to be given on the third day, but the nurse said to

her: "I will fix that all right; I will give you an injection; that will do as well." She didn't say anything to me about this; and when I saw the patient, five or six days after, she actually had symptoms like puerperal fever, and when I came to inquire into her condition I found that her bowels were enormously over-loaded, and that my instructions had not been carried out at all in regard to the cathartic. I then gave her a good dose of calomel, followed by a dose of castor oil; her bowels were moved enormously, and all the symptoms were relieved. In a great many cases these injections are worse than useless, but the woman puts up with them and is satisfied, when really they are inadequate to subserve the purpose that is needed.

Dr. Montgomery.—I wish to correct Dr. Moses. I didn't say that I recommended the senna or gave fifteen grains of calomel, or twenty or thirty. I only said that these were popular remedies in my native country.

Dr. G. A. Moses.—I agree with Dr. Coles in what he says. It is a daily occurrence to find this constipation. It is referred to in nearly all of the text-books. I think Dr. McPheeters is correct in saying that it is a result in a large measure of intestinal paresis. In addition to that, I think there is a great deal due to imperfect intestinal secretion, which is in many instances very greatly disturbed during pregnancy; just as we find the secretion of the kidneys from disturbed nutrition, congestion, or whatever the cause may be, so we find that the intestinal glands become engorged and very greatly depraved, and anatomical changes take place in them for several weeks, which result in a deficiency of intestinal juice. So there are two causes for the constipation. I agree cordially with what Dr. Boisliniere has said in regard to the canonical purge. I think it is a safe practice. I do not care to give, and hardly ever do give, a dose of castor oil, unless the patient has been in the habit of taking it. I much prefer some other form of purgative, and as a general rule, having a view to this muscular paresis of the intestinal tract, I nearly always combine some form of antipyretic, such as strychnia, and in all purgatives I use a preparation of this kind. I vary the treatment according to the necessity of the case. If the secretion is insufficient, I don't think anything answers a better purpose than one or two doses of calomel, or minute doses frequently

repeated, according to the necessity of the case. Following this condition, I have seen some cases of constipation due to paresis indicated by persistent tympanites—distension—which resisted the stimulation of cathartics, almost of drastics. In these cases I have found electricity a valuable agent, and perhaps some benefit is derived from a tonic treatment.

Dr. Coles.—Would you apply electricity to a pregnant woman?

Dr. G. A. Moses.—No, sir. I am talking of post-partum treatment—chronic constipation that follows parturition. I would not use it on a pregnant woman unless I wanted to bring on uterine action. I have found this a decided benefit without the use of any purgative whatever. I use the Faradaic current. I fully agree with Dr. Coles in regard to enemata. They frequently do not answer the purpose.

Dr. S. G. Moses.—In speaking of the use of electricity, the doctor reminded me of the method of Dr. Jackson, of Philadelphia. He used a galvanic battery composed of a cylinder of zinc, united by silver wire with a plate of copper. He put the copper on the tongue, and inserted the tube into the rectum.

Dr. Prewitt.—I am not entirely satisfied with the etiology of the condition that Dr. McPheeters gives us. If I understand him aright, he means to say that, in consequence of the retention of fecal matter, there is a decomposition of that fecal matter and a reabsorption of it into the blood, and thus the system is poisoned. Now I confess that I am not entirely satisfied that this is the correct etiology of the thing. Every member of this society will remember cases of great constipation and long retention of fecal matter—immense impaction of the colon—and yet there were no unpleasant symptoms whatever. I doubt exceedingly whether this is the method of disturbance in the case. Of all the eliminating surfaces of the body the intestinal tract is the most active, and the large proportion of waste matter that gets into the system is eliminated through the bowel, and anything that interferes with the process, causing a retention of this material in the blood, whatever it may be, creates a disturbance. Everyone knows that a diarrhea very frequently is due to something wrong in the system—something that produces a disturbance in the blood, etc., and the elimination takes place by a diarrhea. So also in cholera

there is an attempt to eliminate the noxious substance from the system by a profuse diarrhea. In a great many other things the elimination takes place in that way from the blood, so that if there be any interference with the process of the secretion of the bowel, there would necessarily be a retention in the blood of the material that ought to be eliminated; and consequently, if there be marked constipation—if we have retention of fecal matter to any very great extent—we necessarily have an interference with the process of elimination through the various glands of the intestine, precisely as there would be if we had retention of urine in the bladder to a very great extent by a damming back process. The urine would not be removed from the blood; the retention of the urine in the bladder would thus affect the system. It is the retention of the urine, and not its decomposition, that causes the poisoning of the patient under such circumstances. Now, in one of the cases that Dr. McPheeters reports, the patient took a dose of castor oil, and it scarcely seems possible that in that case there could have been a large amount of fecal matter—enough to give rise to the trouble—yet the doctor speaks of a large amount of fecal matter being discharged, and I suppose that there was some other cause for the trouble in the blood. Suppose there was an absorption of septic matter, and the elimination by the bowels was interfered with by any cause—a simple paresis, if you choose—why should we not have a disturbance of the system connected with it that would be relieved when the bowels were freely cleared and the process of elimination re-established? It seems to me that that would be the more rational explanation of the troubles that ensue in these cases, where we have trouble from this cause, rather than the decomposition of fecal matter in the bowel and the reabsorption.

Dr. Coles.—I don't think Dr. Prewitt's grounds are exactly correct. It seems to me in a case of this kind, where a woman who has recently been delivered has an impaction of fecal matter—where the bowels are loaded with feces—the trouble may arise from one of three causes: First, from a mechanical irritation from the presence of this fecal matter. Secondly, as the doctor suggested, from the prevention of the proper physiological elimination through the bowel; and thirdly, what

he seems to be disposed to dispute, by an absorption of poison directly from the bowel. Now, as we all know, one of the physiological functions of the bowel—especially the lower part—is that of absorption. That absorption does take place from the lower portion is apparent from the fact that as soon as certain medicines are injected they are immediately taken up with a degree of activity that is absolutely astonishing. We know that the post-partum woman is in a different physiological state from what she is ordinarily. She is getting rid of a good deal of peccant matter; the uterus is undergoing active involution during that period, and it is very important that her bowels should be kept open, and the very fact that her bowels are blocked up, cuts off the avenue of escape in that way, and this decomposing matter is retained; whereas, if the bowels are in a normal condition, and nothing is retained over the normal period or for a period that is not very abnormal, the probabilities are that there may be no absorption of the decomposing matter so as to produce an acute affection. But we do see persons suffering from toxemia who are subject to constipation. When this occurs, and the woman is subject to constipation, we can account for it by simply saying that the natural elimination from the body through the bowels does not go on directly and physiologically. There is no doubt also that a good deal of material is absorbed into her system from the bowel, through the decomposing gas; and it is natural to suppose in view of the scybalous masses, which become dry, that all the fluid matter becomes absorbed, and that this is accompanied, as it often is, by dyspepsia, and that the contents of the bowel are necessarily more or less in a state of decomposition. That the fluid contents of the bowel are absorbed is evident from the hard, scybalous condition of the contents of the lower bowel.

Dr. Ford.—The theory of absorption from the bowels is a very patent one. The absorbing power of the bowel, as Dr. Coles remarked, is very conspicuous. The lower bowel, of course, becomes impacted more or less before parturition in many cases, and after parturition it is peculiarly apt to do so. In many of these cases of labor there is so much contusion, exhaustion and laceration of the parts, by the head of the child, that it is necessary to artificially empty the bladder by the

catheter for two or three days after labor, and this condition would favor absorption. Then the nervous contractility of the muscles has a great deal to do with this condition of constipation after labor. Now it is very questionable, indeed, whether a purge on the third day ought to be used as a rule; and in my own practice for 20 years I have been very careful not to observe it as a rule. I always wait and see what the condition of the patient is. If she is in a healthy condition, it is probable that the bowels will move on the third or fourth day; and if she is not in a healthy condition, it is probable the bowels will not be moved, and they will have to be moved with a purgative. I think it is of great importance that we act cautiously, for the simple reason that if the parts have not been very much injured by the labor the bowels will move of their own accord, or by giving a slight enema of soap suds, or by using a little castor oil or a little turpentine, or both. This is a matter to which I have paid a great deal of attention, and I think I have seen great injury done by the use of purgatives in a reckless way. What can be worse practice than giving a purgative with the neck of the uterus severely lacerated? It stands to reason that it must do injury by disturbing the newly-formed adhesions, breaking down the parts again and leaving them open to absorb poisonous substances. As regards the absorbability of materials from the intestines, I think if we consider the details of the phenomenon in these cases, if the parts are quite healthy, there is no reason to apprehend that there will be an absorption of anything improper in the ordinary healthy condition of the parts. Although the absorbing power of the intestine remains, nothing is absorbed; but if there be injuries of the parts about the womb, if secretion be stopped and febrile or subfebrile injuries occur, then the condition is changed. The common decomposition will be set up in the contents of the small and large intestines, and after such common decomposition is set up absorption will take place, and the system may be affected, and thus copremia is probably brought about in such a way. The fecal matter accumulates naturally in contact with the parts perfectly accustomed to its presence, like urine in the bladder, and causes no disturbance; but if the accumulation goes on to a great degree it becomes an obstruction, and some intercurrent febrile movement oc-

curs, or the large mass causes a laceration, and this laceration begets systemic trouble, which becomes reflex and causes the intestine with which the mass is in direct contact, or that higher up, to absorb the fluid brought down. It may be absorbed by the excoriated parts themselves. This effect will all be brought about by the accumulation of such nauseous matter and the common decomposition of the matter, which is then absorbed. Of course we all know that there can hardly be any question of the fact that the presence of these large masses in the intestine causes disturbance by preventing the elimination of certain matters from the system; and Dr. Prewitt is no doubt correct in saying that the prolonged contact of these masses with the glands which secrete certain matters from the blood produces a toxical influence upon the system; but it appears to me that more profound effects are produced by the absorption of this decomposed matter.

Dr. G. A. Moses.—I wish to say one or two words in reference to some points Dr. Ford has mentioned. One is the supposition that the constipation caused here is precisely the same as what you may call bladder constipation—pressure upon the bladder causing paresis of the organ during a certain time. I don't think that can be used at all to illustrate the relaxed condition of the bowels. The constipation which results several days after confinement is not due to the pressure of the head upon the lower part of the rectum. If this produced any form of paralytic condition, it must be confined entirely to that portion of the gut over which the head traversed, and that could not be any enduring condition at all. I don't think the two cases are at all similar. Then again, he objects to the use of a purgative, because there might be a laceration of the cervix or perineum. I cannot see why that should do any harm. The purge doesn't travel over the cervix, and the cushion lying between the vagina and the rectum is sufficient to counteract the vermicular motion that may be imparted to the surface in a great measure. In case of laceration of the perineum, severe laceration, after an operation, regret very much if the patient passes a day without an operation. As regards the reabsorption of material from the intestinal tract, I don't know that it might not occur under certain circumstances, but I think it is only in rare cases that such an amount

of decomposition takes place as to produce such a reabsorption.

Dr. Barrett.—There are two points upon which Dr. McPheeters didn't give us any information. They are important points. One is, whether there was any laceration of the cervix or perineum; and the other, whether the lochial discharges were offensive or not.

Dr. McPheeters.—There was not the slightest laceration of the cervix.

Dr. Barrett.—I have seen such symptoms as the doctor described arise from septic poison and retention of decomposing fluids in the uterus, and I have seen relief come promptly upon washing out the uterus. It seems to me altogether probable that in these cases the absorption of these putrid discharges, which paralyze the bowels, may be relieved by drawing off these pent-up secretions and in this way relieving the septicemia.

Dr. Prewitt.—I didn't call in question the absorbent power of the bowel. We all know that. We know that when these masses of feces remain in the bowel the fluid portion is absorbed, thus leaving the hard, dry mass; that is true enough What I couldn't exactly feel satisfied about was that the difficulty in these cases should be attributed to the decomposition of the fecal masses and the reabsorption of the matter by the blood. Why does not this thing occur in all cases where we have the mass retained for a long time? We all know that there are cases where the masses are retained for a long period of time and that no such result occurs.

Dr. Coles.—The woman is more easily impressed in this case.

Dr. Prewitt.—I don't think that would account for it. We have numbers of cases on record where there has been not only a retention of fecal matter, but an actual absorption of them, so that they were eliminated through the skin, and yet this trouble spoken of has not occurred. I am of the opinion that the result came about through the retention in the blood of materials which it is the province of the intestines to remove, and which under ordinary circumstances they do remove; that there was some septic matter in the blood, which should find its way out of the system by this means, which gave rise to the trouble, and that it is not due to decomposition. I think copremia is not the right term. I don't believe

it is fecal poisoning. I don't think that term expresses the true condition of things.

Dr. McPheeters.—I want to refer briefly to one or two points. The first is the suggestion of Dr. Moses as to the use of strychnia in these cases of paresis. That is one of the best remedies that we have where there is impaction after labor, the result of pressure during gestation, or any other cause of impaction of the bowels where there is paresis. There is almost always a condition of constipation remaining after labor. It is a long time before the bowel regains its natural tone, and I think that it is very important to use some remedy that will produce a muscular contraction. I agree with Drs. Moses and Coles as to the unsatisfactory operation of enemata in these cases. It is merely a small part of the intestine that is reached by this means, and if large enemata are used they tend to produce this very condition of paresis. Then in regard to what Dr. Prewitt states. I know there are causes of retention of fecal matter where there is no toxical condition of the blood. I merely state that it is possible that the retention of these matters may have this effect. These are the only two cases which I have ever met in a practice of 40 years where there was anything of the kind. I have seen a great many cases of constipation where it did not occur, and I have seen persons who suffer with ordinary constipation and are always affected thus to a greater or less degree—there is always a greater or less affection of the blood with persons who suffer habitual constipation. I have in mind now a case of a lady in this city who is now dead, belonging to one of the wealthiest families, who had an odor from her body so offensive to herself and to her family that she would not go out into company because of the smell. Upon inquiry I found that she suffered from constipation, and at my suggestion she used large quantities of water; I made her drink large quantities daily, and in this manner we washed the blood out and finally overcame this condition. I don't pretend to say that in every case of distension of the bowels there is this toxic condition of the blood. In these cases there was no laceration of the perineum or cervix, and no other source to which I could attribute this trouble. Of course the impaction of the canal was only in a small portion of its extent. The alimentary canal is

twenty-five or thirty feet long, and this impaction may only take place in eighteen inches or two feet. That these accumulations may take place without contaminating the blood we all know; but that it may sometimes take place is clear to my mind. I might state that in these cases the discharges were exceedingly offensive. In one case I had to go out of the room, it was so offensive; and the amount of fecal matter that passed was simply enormous. To my mind Dr. Ford did not prove the danger of using a cathartic on the third day. His experience has taught him to do as he does, but my experience has been different. Of course there may be cases and are cases where it is not necessary, and there may be cases where it is injurious, but I think as a general rule it is a safe one.

Dr. Barrett.—These cases that Dr. McPheeters speaks of are confined almost entirely to lying-in women. They are not at all uncommon after parturition. A rise of temperature, intense headache, pain in the abdomen and tenderness over the pelvic organs are characteristic of these cases. I remember, when I first began the practice of medicine, I attended thousands of lying-in women in New York. Dr. Jones was the attending physician at the hospital; and I remember that whenever he came around in the morning to make his visit through the wards, if the woman's abdomen was a little tympanitic, pulse was rapid and temperature high, his universal prescription was: 5 grains of calomel and 5 grains of Dover's powder, to be administered every two hours. He didn't know whether these cases were going to be puerperal fever or not, but usually this was all that was required, the symptoms would generally subside. Those cases are the result of septic poisoning from the absorption of putrid discharges, either from the mucous membrane of the uterus or else the wounds and abrasions received during labor. There are two ways of getting rid of the septic matter: one is by purging out the alimentary canal and getting rid of it in that way, and the other way is by stopping the supply and washing out the putrid discharge. I have seen both methods of treatment equally successful. I have seen a woman who had a rapid pulse, and a temperature of 102° or 103°, with an intense headache, whose abdomen was tympanitic, simply by washing out the uterus and getting rid of the putrid matter relieved almost in two hours.

Dr. Ford.—I took occasion to say during my remarks, that a principal cause of the constipation which succeeds labor is the contact of the fetus, and the pressure that resulted on the surrounding parts causing a local exhaustion. It is probable that during the long course of pregnancy and labor the excitability of the nervous centers has been expended and the parts are left in a state of exhaustion. I don't mean that the mechanical pressure of the head causes the trouble. I will also call attention to this stricture of Dr. Moses in regard to the use of a purgative and the danger of disturbing the parts, that I think it is the rule in laceration of the perineum, or the neck of the uterus, not to give a purgative; I think it is the rule in operations upon the rectum or upon the neck of the uterus, and also in operations on the deep urethra, it is recommended as a surgical procedure to keep the bowels quiet for several days.

Dr. S. G. Moses.—I was operated upon in 1862 by Dr. Pope for stone, and he kept my bowels open; they moved regularly every day.

Dr. Maughs.—There are two plans of treatment: the bowels are either moved every day or they are not moved at all. Either is good practice. Some surgeons recommend that the bowels be moved every day and some do not move them at all. Either will do equally well, but there should not be a mixed treatment.

ST. LOUIS MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, April 18th, 1882.—Dr. Leete in the Chair.

Otitis Media Purulenta.

Dr. Spencer.—I have a patient whom I would like to submit for examination. The case is one of chronic suppuration of the middle ear with two openings, one anterior to the long process of the malleus, and the other against the posterior wall, where there has been considerable destruction of tissue. The case has been one of some months standing. The history of the case I may briefly state as this: Some two years ago the

patient had an acute trouble, for which I treated him and he recovered rapidly. After that I lost sight of him until about two months ago, at which time he experienced an acute attack, with a rupture of the drum head. He had gone into a drug store and asked the druggist to give him something to ease the pain; he gave him what he called tooth-ache drops; this, the patient says, gave him great pain and aggravated the symptoms very much, and there commenced afterwards a very profuse suppuration. When I saw him this suppuration had been going on for a number of days; he was suffering a great deal of pain at the time, agonizing pain, with some symptoms of constitutional disturbance that I didn't like. There was a tendency to delirium, and high fever. I think Dr. James Scott had been attending him as his general physician at that time. I have treated the case altogether by the mechanical method. There has been no medication whatever, and the syringe has not been used since the patient came under my care. I don't know whether it had before that time or not.

The rupture of the drum head had already occurred when I saw him, and there was this double opening in the drum head. When I began to treat him the discharge was very profuse, but the suppuration has entirely ceased. I have used a dry dressing of absorbent cotton for cleansing the ear, freeing the cavity with the suction apparatus of Politzer. I carried the cotton through this large posterior opening and tucked it back into the recess in the posterior wall of the cavity of the tympanum, and afterwards filled the meatus with cotton to give additional weight. The suppuration has entirely ceased. I would like to have the members look at it.

Dr. Leete.—I would like to ask Dr. Spencer if this little instrument on the table here is the needle ordinarily used to wind cotton upon to cleanse the ear?

Dr. Spencer.—That is my own. It varies a little from that usually used.

Dr. Leete.—Is this point fine enough to easily puncture the skin?

Dr. Spencer.—That is always guarded by cotton; it is simply a cotton holder.

Dr. Leete.—It occurred to me that we might have a needle

made with a blunt point, and thus avoid all danger of puncturing the fingers with the instrument.

Dr. Pollak.—I am in the habit of using a probe with a long cleft in it, and I can place the cotton with it without difficulty.

Dr. Leete.—I think so far as possible it is desirable not to have clefts or depressions of any kind in the instrument, as they are likely to carry the poisonous matter. The smoother they are the more easily they are cleansed.

Hereditary Syphilis.

Dr. Hodgen.—I have a piece of bone that came from a patient whose case I have followed irregularly for perhaps nearly twenty years. It is a case of inherited syphilis. The patient removed this bone herself a few weeks ago. It is a portion of the maxillary bone, showing part of the antrum and a portion of the pterygoid process, and part of the body of the sphenoid bone, showing a portion of the sphenoidal sinus. It is an unusually large piece to be removed from that locality, and from the thickness of the upper part it seems to me that it must almost penetrate through the thickness of the body of the sphenoid to the brain. A little study will enable anyone to recognize the various portions. It shows the palatine canal, one accessory canal and the inner terminal part of the pterygoid process. The bone is greatly changed of course; and is very open and porous. In this case nearly all the superior maxillary bone is gone; the nose is gone; the patient is a very unsightly object now, but she was a very pretty girl 20 years ago. A sister of this patient died a year or two ago. The story told me by the mother was that her husband had been a rather reckless man; but that she had no knowledge of ever having had syphilis from him or otherwise. A younger daughter, a handsome girl, is now older than either of the others were at the time of the first manifestation of the syphilis; she has shown no tendency at all to the disease as yet. There was no reason to suspect that these girls were imprudent. The younger one showed the symptoms of syphilis before she was old enough to be tempted to sexual intercourse, and there is no reason to suspect that the other one had been imprudent. The third child is more robust than either of the others were; but it is possible that at a later period there will

be an expression of syphilitic lesion. In the first girl the syphilis manifested itself in the thirteenth or fourteenth year, and in the other in the nineteenth or twentieth; that is the one from which this specimen came.

Dr. Pollak.—Were there no infantile symptoms?

Dr. Hodgen.—There was nothing to indicate the presence of the syphilis at that time, and the mother showed no evidence of syphilis.

Antizymotic Medicines in Septicemia.

Dr. Leete.—I would like to inquire if any of the gentlemen have used boracic acid or the hyposulphites internally in treating cases of septic poisoning by inoculation, and if so with what effects.

Dr. Hardaway.—I would like to say a few words on the so-called antizymotic remedies, and I wish to refer especially to the sulphite and hyposulphite of sodium, which have a marked effect as so-called antizymotic remedies. We all know the early history of the sulphites being introduced by Polli. I can say, although I have no specific data in point, I have treated several hundred cases of small-pox, and from recollection I can say that this remedy has proved more valuable than anything I have tried. I am almost positive that it served to prevent an excessive amount of pus forming and thus secured a less number of pits, and I am almost positive also that the secondary fever was considerably less when this remedy was used. I am satisfied that the result of the treatment of small-pox where this remedy was used was happier and the deaths were fewer than when any other treatment was adopted. There was frequently an absence of a marked degree of pitting. If I were called upon to treat small-pox I should use the remedy. At that time I gave large doses, in the cases of grown persons about 20 grains, mixed with syrup of wild cherry. There is always more or less bronchitis with the small-pox, and I gave the wild cherry for that.

Dr. Leete.—Perhaps I ought to explain why I asked that question. It was simply this: I read Polli's article in the *American Journal of the Medical Sciences*, in which he speaks of the hyposulphite of soda, in 1866 or the early part of 1867, and some years later, the attention of the profession was called

to the fact that in a line of similar experiments he had attained similar results in septicemia by the use of boracic acid. I wanted to know what the experience of the profession was in regard to that remedy. I certainly place great faith in it; I think it is a valuable remedy. I have seen several cases of septicemia, caused by the inoculation of decaying animal matter, no doubt, in which it has proven very beneficial. One case that I remember was that of a steamboat man, who in handling some wood carelessly got a sliver in his finger, and very soon he had unmistakable evidences of septic poisoning. No doubt the sliver had been in contact with decaying animal matter. Another case that came under my observation was that of a young man who picked up a hoop and in breaking it got a little splinter into his hand, and within forty-eight hours it was evident that he was suffering from septicemia. In these cases the use of sulphite of soda was very beneficial indeed.

Dr. G. A. Moses.—I have been making some few observations under circumstances that are extremely unreliable. I have been observing the effect of the so-called prophylactic use of the sulphite and hyposulphite of soda in scarlet fever. I don't know who it was who first suggested their use. I have tried it in a number of cases, and I have used it in the case of children particularly. In two houses in which I have used it there have been no second cases. I think it is an experiment well worth trying. In one case a child in the house had the fever, and another exhibited symptoms of scarlet fever. I gave this remedy, and in a few hours the symptoms disappeared and the child recovered.

Dr. Hodgen.—I had a patient with a compound comminuted fracture of the thigh who exhibited symptoms of septicemia, and was in a bad way. I gave him hyposulphite of soda, and he improved and was very much better; he purged very freely, and after a while the symptoms of septicemia returned. I repeated the remedy, and he became better again. There is no question that the sulphite of soda is a good remedy in cases of septicemia, and I wouldn't hesitate to use it. There was just one remark of Dr. Leete that perhaps it will be hypercritical to refer to. He intimates that in the case of the man handling wood there must have been some animal matter in contact with the wood. While I believe that decomposing animal

matter furnishes the best agent for the production of septicemia, I think septicemia often occurs without any such active agency. A case came under my notice about ten days or two weeks ago, which was relieved by Dr. Spencer, and I think it would be of interest to the society. The child had an inflammation of the ear and mastoid cells. There were a number of swellings on different portions of the body, and finally one made its appearance below Poupart's ligament, which resulted in suppuration, and at one time there was a suspicion that there might be hip disease: these were abscesses without pus, as Lister would express it, perhaps; but finally this large abscess with pus formed.

Dr. Pollak.—What do you mean by an abscess without pus!

Dr. Hodgen.—When I see a case of felon in which the patient can say the pain began and is very intense at a certain point, upon which you could put the head of a pin, I take my knife and make an incision at that point, and if I can get a drop of pus the felon disappears often quite quickly: that might be called an abscess without pus—it is almost without pus, without any pus cavity. There is an inflammation with exudation into the tissue without any distinct cavity. I think it is a very good expression. I would like to have Dr. Spencer relate the history of the case. I think the members of the society would be interested in it, inasmuch as it shows how a small surface may cause intense blood poisoning.

Dr. Spencer.—I will say, Mr. President, that all I know of the history of the case I obtained from the parents of the child: I know nothing of the early history of the child otherwise. The child is now about twelve years of age. I only saw this child a short time previous to these manifestations, and I regarded it as a clear case of metastatic abscess, from the absorption of the pus in the cavity of the tympanum. It seems a perfectly fair inference. The drum-head was entirely gone on both sides, and the ossicles were gone on one side, only the stapes remaining. One ear healed very rapidly, although of course there remain these consequences of the destructive process—an absence of the drum-head and the ossicles of the middle ear. On the other side the suppurative process continued, the child's health suffering in consequence of this depletion; the child had become very weakly indeed. Just in proportion

as the improvement of the suppurative trouble took place, the general health of the child improved. This trouble went on until the local manifestations of blood poisoning appeared. I don't know anything else in connection with the case.

Dr. Leete.—I very probably was not sufficiently explicit in speaking of the case of the steamboat captain. I didn't wish to be understood as saying that he necessarily must have been infected with some decaying animal matter. I know, and we all know, that a simple wound may sometimes be followed by septicemia, when there is a vitiated condition of the system.

August 8th, 1882—Dr. G. A. Moses in the Chair.

Dr. Funkhouser read a paper on the Use of Electricity in Diseases of the Ear.

Foreign Body in the Ear.

Dr. Todd.—I have a specimen here that is rather a curiosity. This is a large piece of glass that I took from the ear of a girl about 17 years of age. It is a piece of some glass instrument which was pushed into the ear and broken off. She came to the clinic to have it removed. It was with difficulty that she came under the influence of the anesthetic. In this connection I would like to inquire about a discussion that took place here some two or three meetings ago, in which Dr. Dean, I think, maintained that the genital organs were the last to come under the influence of an anesthetic. Of course it is difficult to tell, but in this case I think the ear was the last to lose sensibility. It was exquisitely sensitive, and the least touch caused the patient to move. It was with great difficulty that we succeeded in getting the patient under the influence of the anesthetic. I have never thought to make an experiment to determine which part is the last to lose sensibility, but I intend to do so at the first opportunity. I would like to ask Dr. Mudd what has been his experience in this regard.

Dr. Mudd.—I haven't had much experience in the matter, but I think it is a fact that the anus is one of the last parts to lose sensibility. I removed a foreign body from the nose of a little child to-day—a porcelain tip from one of those swings that are used frequently had been pushed into the child's nose. It was oval and smooth, but there was a little depression in

one side, and I got an instrument into that and removed it without much trouble.

Dr. G. A. Moses.—I think it is a difficult matter to decide what particular part is the last to lose sensibility under the administration of an anesthetic, because the part which is in a pathological condition is generally the most sensitive.

Dr. Pollak.—I always refrain from giving an anesthetic in removing these foreign bodies from the ear.

Gastric Coma.

Dr. Saunders.—I wish to report a peculiar case, at least in my experience. About a year ago I was called to see a man whom I found in a state of profound coma. The family told me that he had eaten his supper, and as soon as he had finished he tumbled over in the condition I found him. I got there about twenty minutes after the commencement of the attack. He was completely unconscious; the breathing was perfectly normal—at least it seemed to be normal; the pulse was strong, and there seemed to be no symptoms of paralysis. There was no hemiplegia whatever. The patient was a young man about 25 years old. There was no alcoholic intoxication; he was perfectly sober when he came home, as I was informed by the family. There was nothing to indicate Bright's disease, and it was in fact rather a puzzling case. His wife told me that he had been in the habit of eating with the greatest rapidity. I didn't know what to make of the case. I had no apprehension that he had eaten anything to give rise to the condition, as the rest of the family had eaten of the same food. I determined to use the catheter and draw off some of his urine, and test it for albumen, as I thought it might be a case of uremia. I hadn't got the catheter in more than an inch when he bounced up in bed like magic. I was never more astonished in all my life. He asked me what I was trying to do, and seemed intensely amused. I couldn't make him understand what was the matter and what I was doing. I gave him an emetic and ordered it to be repeated. I called to see him next morning and found that the emetic had not operated. The man went to work, and that was the last of the attack. I didn't know what to make of it, but I have since seen such cases reported in the "American Journal of the Medical Sciences" as gastric coma.

Dr. Leete.—I remember a few years ago that a gentleman created a scene at an entertainment in Stoddard Addition. I saw him the next day, and he told me that he had missed his lunch and purposely had not eaten supper, and it was a late hour when the repast was spread, so that he had a good appetite, which he gratified very abundantly. By his own admission, he ate very largely. The rooms were very warm, and after he went from the dining room he was soon the center of attraction. He became unconscious and remained so for some time. Finally, when a physician reached him, he had vomited copiously, and had come to himself and felt perfectly well. He was able to go on with his business the next day.

Cirrhosis of the Liver.

Dr. Pollak.—I wish to report a case of error in diagnosis. A woman whom I have attended, at different times, for the last twenty-five years, last winter fell down two or three steps from the house to the yard, causing a contusion over the patella, and disturbing her mind considerably. Dr. Gregory attended her for this. Some other member of the family was unwell about this time, whom I attended. She was always speaking of her trouble, but never gave me a chance to ask her about it. At last one day she sent for me, and begged me to examine her, which I did, and found a most enormous umbilical hernia. The umbilicus was large enough to thrust my whole hand in. The hernia was easily reduced, but it was very difficult to keep it reduced. I couldn't find a truss large enough to fill the cavity. When I returned from the American Medical Association I was again sent for on account of a dropsy, and sure enough I found both of her legs enormously swollen. I couldn't account for it at all. I couldn't find any fluctuation of the abdomen. I couldn't make out what it was. I punctured the parts, and a large quantity of the serum oozed out. For two weeks she was much relieved. But what was the cause of the edema I didn't know. She was 54 years of age and had passed the menopause. Flooding continued, and I suspected that there must be a uterine tumor—a polypus, or something of that kind. I requested her to let me make an examination, but as she had never been married she didn't like the idea, and it was three days before I got her consent. I could not reach the os, on account of the mass of fat, until I pressed the uterus

down as much as possible, and when I succeeded in reaching it with the finger I found it normal. The uterus was movable, and the os was round and perfectly normal. Still, I supposed there was a tumor somewhere which interfered with the circulation. I never could get that idea out of my head. There was a great deal of albumen in the urine. I gave her some pilocarpin, but it had no effect whatever. I afterwards got some pilocarpin at a different place, and the first dose of it reduced the ascites. The very first dose produced a profuse perspiration. This shows the difference between the spurious and the genuine articles. Ergot had no effect upon her disease whatever. I took a well known gynecologist with me, and had him examine her. He could find nothing abnormal about the genital organs. Two days afterwards another lady brought a physician to see her without my knowledge, but he refused to examine the case on learning the state of affairs, unless he saw me. I met him a few hours afterwards, and he told me that he had been there. I requested him to go back with me and assist me, as I didn't know what was the cause of her trouble, and it was growing worse all the time. The edema continued, and her abdomen became perfectly enormous in size. Well, the woman died, and after a good deal of trouble I got a post-mortem examination. I never cut into such a mass of fat in my life before. I believe there was fully three inches of fat. About a gallon of ascitic fluid came out. There was no trace of a tumor in the abdomen, and none of the genital organs were affected. The cause of her trouble was scirrhosis of the liver. The whole upper surface of the liver was actually wrinkled up in every direction. There must have been hundreds and hundreds of little nodules, from the size of a pin-head to the size of a pea or a little larger. The liver was not more than two-thirds of its normal size. I have saved a specimen, which is now being prepared for the microscope.

Dr. Todd.—Did you examine her heart?

Dr. Pollak.—The heart was examined, but we could detect nothing unusual on account of the tremendous quantity of fat about it. The temperature during her illness never went above 99°. Most of the time the pulse was from 88 to 92, and quite regular.

AMERICAN GYNECOLOGICAL SOCIETY.

The Seventh Annual Meeting of the American Gynecological Society was held in Boston during the third week of September.

The Society was called to order Wednesday, the 20th, by the President, Dr. T. A. Emmet. After roll-call, the election of a number of prominent physicians, who were present in the hall as invited guests, and an address of welcome by Dr. G. H. Lyman, Dr. Joseph Taber Johnson, of Washington, D. C., read the first paper—on the Use of Ergot—its object being rather to clearly demonstrate the powers of the drug, and the dangers accompanying its use, and to define the accepted rules for its administration to women in labor, than to develop new points. It was more for the general practitioner than the specialist, and was well put.

The paper was rather favorably discussed by Drs. Reynolds of Boston, Barker of New York, Howard of Baltimore, and Trask of Astoria ; exception being taken, however, to many individual points.

The paper of Dr. Sutton, of Pittsburgh, who was not present, was read by the Secretary, Dr. Chadwick, of Boston.

The methods of treating the pedicle in ovariotomy were analyzed, from Dr. Robert Houston of Glasgow, in 1701, to the present day—the conclusion being that we are now rapidly returning to the treatment adopted by McDowell in 1809, namely, to tie it with a ligature, leave it inside the belly; or to that of Nathan Smith, 1821, to cut off the free ends of the ligature. Finally, the more important conditions, favorable and unfavorable to ovariotomy, were referred to.

Some remarks upon the subject were made by Mr. Knowsley Thornton of London, a guest by invitation, and by the veteran operator, Dr. Kimball of Lowell. The former favored the carbolized ligature and dropping of the pedicle: the latter referred to the more favorable climate of Europe in explanation of the better results of European operators.

The afternoon session was opened by Dr. Parvin, of Indianapolis, with a paper on the Care of the Perineum in the Second Stage of Labor, which he considers most important. He advises

against the use of the finger in the rectum, as causing irritation and diminishing the space, but advocates its support by the hand and fingers of the accoucheur during expulsion of head and shoulders, without the intervention of a napkin. Horse-hair sutures were recommended, and the custom of tying the legs together condemned. Dr. Parvin allows the patient all liberty of motion in secondary as well as primary operations.

Dr. A. H. Smith, of Philadelphia, thinks that the true support of the perineum lies in the proper management of the child's head. Dr. Howard looks upon the shoulders as equally liable to rupture the perineum; deems it important to deliver one shoulder as soon as possible, that both may not come together.

Dr. Barker, on "Leucorrhea, its Constitutional Causes and Therapeutics," made a hit at the great error of the day in looking altogether for local causes, and ignoring the frequently more or all important general or constitutional causes—an excellent, well-timed paper. Most particularly in young unmarried ladies, and ladies past the change of life, constitutional causes may be looked for; yet if the leucorrheal discharge is occasionally sanguinolent, local treatment will be found to be necessary.

Thursday morning the first paper was read by J. Knowsley Thornton, M. B. C. M., of London, England, entitled: "The Relative Value of Hysterectomy and the Complete Removal of the Uterine Appendages for the Cure of Uterine Fibroids." He says that fibroids, if ever cured, are probably cured by nature (a decided error—G. J. E.); that they are dangerous and cause death; hence medication being useless, surgical interference is necessary, and oöphorectomy is to be preferred to the supravaginal amputation as safer and equally reliable. Hysterectomy or the supravaginal amputation should only be tried when the removal of the uterine appendages fails or great hemorrhage sets in during the operation.

Dr. Goodell, of Philadelphia, advocates the supravaginal amputation on the plea that it does not *mutilate* women as oöphorectomy does.

Dr. Thomas, of New York, had performed hysterectomy, never attempted oöphorectomy.

Dr. Engelmann, of St. Louis, advised against stopping anesthe-

sia during the apparent dangerous collapse which occurs during the operation, always coincident with the tightening of the ovarian ligature, as it is simply a nervous response.

The president's address followed. Matters concerning the society being reserved for the business meeting, Dr. Emmet confined himself to a scientific subject, and read his paper on "New Methods of Exploration, with Pathology and Treatment of Certain Lesions of the Female Urethra." He advises against dilatation — deems it dangerous, often followed by disagreeable consequences. He advocates a button-hole opening in the urethra for the purpose of permitting free access for direct and effectual treatment of the various affections of the urethra, such as: 1. Urethritis. 2. Pedunculated and vascular growths. 3. Prolapse. 4. Fissure, always near neck of bladder. 5. Urethrocele. 6. Laceration. The operation is performed with the patient under an anesthetic, in Sim's position; a small Sim's speculum is used and the opening made with button-hole scissors into urethro-vaginal wall, nearly to the neck of the bladder, but never into this. The hole is kept open until treatment is completed.

Dr. Thomas, of New York, brought before the society twenty-one cases of extra-uterine pregnancy. Speaking of symptoms and treatment, he advised the use of electricity if extra-uterine pregnancy be discovered before the fourth month; later, laparotomy; in case of abdominal pregnancy going to term, laparotomy or elytrotomy.

Dr. Garrigues, of Brooklyn, followed with a paper on the Use of Electricity in Extra-Uterine Pregnancy—very thorough and complete, comparing the ill results of operation with excellent success achieved by himself by the use of electricity; the only and necessary conclusion is that electricity is *the routine* method of treatment for cases of extra-uterine pregnancy unless peculiar complications occur.

Third Day, Sept. 21.—Dr. Busey, of Washington, read his paper, entitled: "The Influence of the Constant Use of High-Heeled French Shoes upon the Health and Form of the Female, and upon the Relation of the Pelvic Organs," showing the injurious effects of this fashionable article upon woman; a laborious, thorough and scientific paper.

In the discussion following, both Drs. Barker and Thomas,

of New York, took grounds against their injurious influence.

The next paper was that of Dr. Drysdale, of Philadelphia—"The Ovarian Corpuscle; its Origin and Characteristics"—an elaborate defence of Drysdale's ovarian corpuscle.

Mr. Thornton, of London, and Dr. Engelmann, of St. Louis, took similar grounds against the existence and diagnostic importance of this body.

The afternoon session at three o'clock was entirely occupied by an interesting and elaborate historical and scientific paper on "The Theory of the Mechanical Treatment of Flexions," by Dr. E. Van de Warker, of Syracuse.

Five o'clock, the hour for adjournment, having arrived, the meeting closed with the introduction of the President-elect, Dr. Gilman Kimball, of Lowell, Mass., by the retiring President, Dr. T. A. Emmet, of New York.

The following papers were read by title only, on account of the absence of the authors: "New Operation for Vesicocele," by Dr. T. A. Reamy, of Cincinnati; "A New Operation for Ruptured Perineum," by Dr. J. C. Warren, of Boston; "Measurements of the Uterine Cavity in Child-bed," by Dr. W. L. Richardson, of Boston.

The usual social reunions occupied the time intervening between the hours of scientific work.

PROCEEDINGS OF THE TRI-STATE MEDICAL SOCIETY—EIGHTH ANNUAL MEETING.

As mentioned in the last issue of the COURIER, the sessions of this association were held in Terre Haute, Ind., on Sept. 26th, 27th and 28th.

The morning of the first day found a large attendance ready for work. The committee of arrangements made the usual report, and through its chairman, Dr. Jno. E. Link, gave evidence of having done nobly for the association. Some of the results were a fine hall, bright with hot-house plants and mottoes, reduced railroad fare and hotel charges, and the distribution of hundreds of postal cards and letters of invitation.

The secretary, Dr. Burton, reported as follows: "For the year now ending, there has been nothing unusual in the secre-.

tary's office, excepting an increase in correspondence. Gentlemen from all parts of the country seem anxious to know something of our plan of organization. I have very many times endeavored to explain the peculiarity of our association, and yet it seems there are very many who do not understand. It may be out of place to call attention to that matter now. To any strangers that may be present I will say that our organization is peculiar, in that it does not deal with ethical matters; has no constitution, no by-laws; and yet, that it may not tend to disorganization of other societies, but rather to aid them, it is an accepted rule that we receive none to membership who are not regular physicians, and reputable in the communities where they practice. Members of the American Medical Association, of any of the state or county societies, are received without question. Those of other schools than regular are not eligible to membership. In fact we receive no one except such as are duly qualified to enter their state or the American Medical Association. Gentlemen of the Indiana State Medical Society who desire membership in this will be received on application. Also, members of the Illinois and Kentucky State Societies. Yet the latter two have a reputable membership who are not members of their state societies, who will also be received on application. Gentlemen who belong to neither of these societies must furnish vouchers. I hope that with these statements there will be no misunderstanding among the correspondents of the year. I have received acknowledgement of the membership of J. Matthews Duncan; also of Spencer Wells, the great European ovariotomist, who promises to contribute when anything of real merit presents itself. The publications of transactions I know nothing about. I have gathered up quite a number of antique books and journals that I propose to make over, together with all my medical library, journals, etc., to this society, to be the property of the society as long as the organization continues. I have at present about 275 volumes. While the number is not large, it is such as I have, and it is to be a free-will offering to the society."

The treasurer, Dr. Beard, reported the finances to be in a healthy condition.

A proposition to found a library for the association was discussed and found favor.

The afternoon session was opened by a most excellent paper, on Origin of Heat in Fever, by E. Wheeler Jones, ex-president of the Ill. State Association. It commanded marked attention, and was followed by an essay by Dr. Hunter, of Ill., on the Use of Iodine in Fever.

A very original and well written paper, "Is the Child Legitimate?" by Dr. Booth, of Sparta, Ill, was, in the author's absence, read by the secretary.

Then followed the address of President Holloway. [See December COURIER.] The address was enthusiastically received, and showed careful preparation by this efficient chief officer.

Dr. Thompson, of Indianapolis, delivered a lecture on Diseases of the Eye and Ear, receiving a vote of thanks for his able effort.

The morning session of the second day showed a large attendance from all parts of the West.

Dr. Morell Mackenzie, of London, was introduced, and the regular order was suspended for his reception. By request Dr. Mackenzie addressed the association on the subject of Laryngeal Phthisis. He said: "I am glad that the general profession is becoming interested in this disease. It is of so frequent occurrence, and often so difficult to manage, that every physician should be acquainted with what is so far known regarding it. There are few cases, if any, in which the disease is primarily in the larynx. Some years ago, with the assistance of Dr. Porter, now of St. Louis, I collected several hundred cases to solve the question. He recorded cases from the clinics of the London Hospital, where there were more cases of pulmonary phthisis than laryngeal, and I noted cases from the Throat Hospital, where there were more of the laryngeal complications. Even when these series were combined, we found that there was always evidence of simultaneous and generally primary invasion of the lungs. This is somewhat at variance with my early views, but the larger experience warrants the statement. It is now conceded also that the laryngeal deposit in these cases is tubercular.

A few points in differential diagnosis, besides those commonly found in the books:

Laryngeal phthisis is characterized by infiltration, generally in the region of the arytenoid cartilage and ventricular bands; in laryngeal catarrh there is little if any thickening.

In laryngeal phthisis the ulceration is slow, and at points of greatest infiltration as a rule; in syphilis it is rapid, and with the character of syphilitic ulceration elsewhere. In laryngeal phthisis the deposit is generally in the upper portions of the larynx; in cancer the disease is more often within, beginning in the sinuses, or the inner portion of the ventricular bands.

I would not detain you to enumerate all the well-known differences of these conditions, but would have you bear in mind the value of the evidence gained from a careful examination of the lungs in all cases of suspected laryngeal phthisis.

The treatment of laryngeal phthisis is mainly palliative. Early in the disease the local use of astringents is indicated, and further on, especially if there be pain, insufflations of morphia. The best method of making applications is directly, but gently, by means of the brush or cotton-covered probe, to touch the point of disease. Sprays may be used for cleansing, and for insufflation a tube holding the powder should be attached to the air-bulb by rubber tubing. In those generally found in the shops the bulb is directly fastened to the tube, and when compression is made the instrument is often thrown out of position."

Dr. Mackenzie then discussed the question of tracheotomy in laryngeal phthisis, believing that it seldom does good, and is often harmful.

Dr. Porter, being called on, said he believed that laryngeal phthisis was better understood than formerly, through the efforts of such men as Dr. Mackenzie. He was glad to see the position now endorsed by the best authority, that laryngeal phthisis is tubercular He was not entirely hopeless regarding the result of treatment, for, beside the palliation which often follows judicious applications and medication, he had seen at least two cases recover from the laryngeal complication. He would not further interfere with the regular programme.

On motion of Dr. Griffith, Dr. Mackenzie was made an honorary member of the association.

Dr. Willien, of Terre Haute, read a paper on Abdominal Surgery, illustrated by cases of ovariotomy and Battey's operation.

A paper by Dr. Dixon, of Henderson, Ky., on Peritonitis, was read by proxy.

The last paper of the morning session was by Dr. Haughton, of Indianapolis. Subject: Laparotomy; followed by an interesting discussion on this and the two preceding.

The second afternoon was fully occupied. The discussion of the morning was continued, Dr. Prince, of Jacksonville, making some valuable suggestions upon the methods of stitching intestinal wounds.

Dr. Hughes, of St. Louis, read a long but interesting paper on the Mental Status of Guiteau, which is to be published in the *Alienist and Neurologist.*

Dr. Richard Owen presented an essay on Embryology, Dr. Little a paper on Hernia, and last of all an amputation below the knee was performed by Dr. Link. Alcohol was used as the anesthetic, and the open flap method, as originally suggested by the operator, was used.

Drs. Speed, Love, Charlton, Swofford and Keller were appointed a nominating committee.

In the evening Dr. Owen, of Evansville, read an able paper on Hernia—fully discussed; Dr. Speed, of Louisville, an essay on Development; and Dr. Barrett, of St. Louis, a paper on Lacerated Perineum, written in the author's terse, direct manner, eliciting a good deal of comment. (To be published in the COURIER.)

The third morning session was opened by a paper by Dr. Beach, of Vandalia, who exhibited a truss of his own invention.

Dr. Stokes presented a paper on the Abdominal Band, and afterwards there was a discussion founded upon the operation of Dr. Link the previous evening. A number of cases were reported in which an anesthetic effect was produced by the administration of an ounce of whiskey every ten minutes, anesthesia coming on after from four to six doses.

Dr. Comminger contributed a paper on Fractures of the Fore-arm.

A vote of thanks was tendered to the editors of the medical journals who had so ably aided this meeting. Much of the success and the large attendance was due to this source.

Fifty dollars was voted the secretary in appreciation of his work.

In the afternoon Dr. Forsythe read a paper on Calomel in Infants, and Dr. Harvey reported a number of interesting cases.

A committee on necrology were appointed—Drs. Chambers, Young and Letcher.

A vote was passed thanking the chairman of committee of arrangements, Dr. Link, for his labor in the good cause.

The nominating committee reported as follows, and report was unanimously adopted:

President—Dr. William Porter, St. Louis, Mo.

Vice Presidents—Joseph Eastman, Indianapolis, Ind.; Jas. H. Fletcher, Henderson, Ky., and Dr. Chambers, of Illinois.

Secretary—G. W. Burton, Mitchell, Ind.

Treasurer—F. W. Beard, Vincennes, Ind.

Chairman Committee of Arrangements—T. B. Harvey, Indianapolis, Ind.

Indianapolis was chosen as the place for the next meeting, and the time the third Tuesday in Sept., 1882.

DISTRICT MEDICAL SOCIETY OF NORTHWEST MISSOURI.

This society held its thirty-ninth quarterly meeting in the court-house yesterday, Oct. 12th, at 2 P. M., Dr. J. M. Richmond in the chair, and Dr. J. W. Heddens secretary.

The attendance was not as large as usual, the physicians in the country being all busy at this season, though the meeting was interesting and profitable to those present, some twenty-five in number.

First after the business order was an essay by Dr. N. F. Essig, of Plattsburg. Subject: Subinvolution of the Uterus. He spoke of its causes, and measures to be used during the lying-in month tending to its prevention, and the best means of relieving it when established. Most prominent amongst the causes he claimed to be the too early rising of the patient, and the use of the "time-honored bandage." The main curative measures were hot water and ergot. A very animated discussion sprung out of the reading of this paper, taking up most of the afternoon session—the paper and remarks entering very fully into the pathology of this condition, the effort and manner of nature in getting rid of the now useless material; drainage, absorption, etc.

The other regularly appointed essayists being absent, reports of cases were called for.

Dr. Christopher reported the case of a young lady who, in early life, had chorea, subsequently as an adult was taken with aphonia lasting a year, then occasional attacks of hysteria; recently a persistent cough during the day and aphonia, followed by a disappearance of these symptoms and the reappearance of chorea. Several members spoke on the case, believing the symptoms all to be hysterical in their origin.

Dr. W. J. Heddens reported a number of cases, singular in their character, appearing in certain families and localities, commencing with chill and fever and running into a typhoid character of fever, with symptoms of cerebro-spinal meningitis and irregular paralytic symptoms. These cases run from three to five or six weeks. All so far had recovered, but they were unpleasant cases to manage. Quinine had no effect in cutting them short. Other members had similar cases.

Dr. Stringfellow reported cases of dysentery treated successfully by hypodermic injections of ergot, when the stomach refused to tolerate any medicine. Other members had used the same remedy, but not so successfully in every instance.

Dr. French reported a case of peritonitis.

Chlorosis and anemia, the regular subject for discussion, was indefinitely postponed, owing to the lateness of the hour.

Essayists appointed for the next meeting were Drs. Siemens, Christopher, Goslin and Bryant. Subject for discussion: Pneumonia.

Editorial Changes.—Dr. Julius Wise, who established the *Mississippi Valley Medical Monthly* a little less than two years ago, being about to remove from Memphis to St. Louis, will be succeeded in the editorship of that Journal by Dr. F. L. Sim, who has been a frequent contributor to its pages heretofore.

Drs. Holland and Cottell, who have edited the *Louisville Medical News* during the last eighteen months, since the death of Dr. Cowling, have resigned, and will be succeeded by Drs. L. P. Yandell and L. S. McMurtry.

The Southern Illinois Medical Association will meet in Anna, Ill., on Wednesday, November 15, for a 2 days' session.

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ORIGINAL ARTICLES.

TRACHEOTOMY FOR MALIGNANT DISEASE OF THE LARYNX.

BY H. H. MUDD, M. D., ST. LOUIS.

[*Prepared for the Tri-State Medical Society.*]

IT is not my purpose to present the statistics of tracheotomy, or extirpation of the larynx for cancer, nor do I desire to give an exhaustive review of the literature on this subject, but having had opportunity to observe more or less fully the progress of two cases of cancer of the larynx on which extirpation was performed, as also a number of cases in which tracheotomy was made for the same condition, I, although I have nothing specially new to offer in the way of suggestion for treatment, have thought the subject one of sufficient importance to present to you the results of my limited observation.

The history of the cases here presented will be briefly given, and the deductions from them will be presented at the close of the paper.

Mr. A., aged 74, was first seen by myself in 1878, in consultation with Dr. Glasgow; he then had fibro-sarcoma of right side of larynx. Operation was deferred until necessity demanded tracheotomy, which was performed in February, 1879, while he was absent from St. Louis, and in Chicago. As the subsequent history of the case shows, and subsequent dissection confirmed, the opening was made not in the trachea, but in the thyroid cartilage. The relief obtained from this operation was imperfect; the tracheal tube could never be made to rest properly in the opening; the amount of air received through the opening was insufficient, and the tube was a constant source of irritation to the larynx and to the patient. He failed to receive the relief that should follow such an operation. He was unable to return to St. Louis until May, 1879, and then he was so feeble that it was necessary to have a physician accompany him. The larynx was extirpated on October 12th, 1879, by Dr. Lange, of New York. Death followed May 2d, 1880. The patient recovered from the operative procedure, but he died of asthenia after a brief but painful respite of six months.

Mr. H., aged 45, was a man of good habits, nervous temperament, and of rather delicate frame. He was first seen by myself in consultation with Dr. Wm. Porter, of St. Louis, in Aug., 1880; he then had a little epithelial ulcer on right vocal cord and in ventricle with hypertrophy of mucous membrane about it. Owing to his nervous temperament he was exceedingly anxious to be entirely free from his disease. The operation for extirpation was discussed, and at the urgent solicitation of the patient was finally performed by Dr. Jno. T. Hodgen, in September, 1880. This was done after consultation between Drs. Hodgen, Glasgow, Porter and myself—Dr. Glasgow opposing, and Dr. Porter and myself favoring the operation. One-half of the thyroid and a portion of the cricoid was removed without much difficulty, and without any marked immediate shock. A large tube was placed in the opening. The growth was

entirely removed. The depression following the operation increased and became very marked in 36 or 48 hours, and notwithstanding a moderate amount of nourishment was taken, the cough and nausea became obstinate and rapidly exhausted the patient, who succumbed to nervous exhaustion and died on the 4th day.

In the first of these two cases, Mr. A., an aged man of 74 years, died one year after primary tracheotomy and six months after extirpation of larynx. I think tracheotomy properly performed would have given more perfect relief and longer life.

In the other case, I believe now the result would have been different if primary tracheotomy had been performed, and extirpation, which I think was here legitimate, attempted at a later date. This case of epithelioma early diagnosed in a middle aged man, otherwise healthy, represents fairly, I think, the conditions which demand extirpation and not simply tracheotomy.

E. B., aged 51, suffered during the summer of 1880 and succeeding fall and winter, with occasional sore throat, and during winter with suffocative attacks. May 30th, 1881, respiration was so difficult as to render sleep almost impossible, and respiratory efforts very marked. Laryngoscopic examination revealed tumor (supposed to be fibro-sarcoma) in right aryteno-epiglottidean fold, projecting well across lumen of larynx. The surrounding parts were congested, irritable and sensitive, and breathing exceedingly laborious. I performed tracheotomy May 4th, 1881. In the latter part of June, wound about tube had healed nicely, deglutition was easy and the breathing free. September 15th.—The size of tumor has diminished fully one-half, opening in larynx is so free that the left vocal cord can be observed, and parts about and contiguous to larynx exhibit but little irritation. The mucous membrane is pale, but while the vessels are enlarged the edema and thickening have disappeared. Patient's general condition is materially improved, his appetite is good,

and he suffers but little pain. January 31st, 1882.—Upon laryngoscopic examination I find a ragged irregular tumor occupying right aryteno-epiglottidean fold; it extends outward upon the pharyngeal wall, and has drawn inward a fold which extends upward toward anterior arch of palate—a hard, round nodule is present in the lateral wall of the pharynx and behind this fold. The mass of the tumor is now attached to pharyngeal wall, as well as to aryteno-epiglottidean fold and thyroid cartilage. The bulk of mass, although nine months have elapsed, is now no greater than at time of operation, yet the surface involved is increased, while that portion which projects into the larynx is much smaller. Patient's strength much improved, notwithstanding the tumor is ulcerating. August 18th, 1882.—Patient's general condition is excellent; he has gained strength and looks younger, although the tumor is growing and the swelling is now perceptible in the neck, to the right of and above the larynx.[1]

Mr. E. J. T., aged 69, during fall of 1879 was confined to the house for about three weeks with cold; the cough, which was frequent, changed its sound and assumed a guttural, husky tone, respiration became difficult, and after recovery inhalation remained oppressed. About January or February, 1880, he noticed noisy respiration and a roughness of voice, suddenly choked and could not get breath, sleeping became difficult and unrefreshing. In May, 1880, he noticed a tumor in right side of the neck. In July he had trouble in eating, often choking in the midst of a meal. The trouble increased until the middle of August, when he had to confine himself to soft food. Insomnia continued to increase. In August I found on right of neck, in posterior triangle, a hard irregular flattened swelling, with the base perhaps three inches in diameter, and tissues about the neoplasm a little sensitive and infiltrated. The epiglottis was folded, so that lateral margins approximated

[1] Patient was found dead in bed in November, 1882, about nineteen months after tracheotomy.

each other very closely. The upper end was turned downward and backward, so that it concealed in part the deeper portions of the larynx. There projected from left side of larynx a thickened fold which represented the false cord, but which flapped, or moved up and down with the respiratory effort. This concealed the true vocal cords. At the extreme posterior border of the larynx was a mass, reddened, infiltrated and sensitive, which involved the palatopharyngeus muscle, rendering it prominent and well defined in its lower part. The mass extended also outward and forward toward the tonsil, making a prominent nodule which rested upon the right superior border of the thyroid cartilage, overhanging the cavity of the larynx and disturbing its motion in swallowing. I performed tracheotomy October 12th, 1880. Six weeks after operation improvement became rapid and marked, although cough persisted and mucus was still annoying. From two to two and a half months after operation he "was at his best for eating;" he "could swallow pretty easily, even solids, without pain." He felt strong, vigorous, and gained in flesh. During the first five or six weeks after operation the larynx gave no trouble; after that time it began to smart and burn while eating. March 10th, 1881, the patient made the following notes of his condition:

"Swallowing is becoming more difficult, larynx is inflamed, and hurts not only at meal times but also when quiet. The sensation is a burning, fiery, dry one, peculiar to my condition. The trouble about the throat is most marked during the afternoon, when there is a sense of compression about the throat. Another late development is trouble in swallowing liquids, a part of the fluid sometimes coming back through the nose. I am most comfortable between 11 P. M. and 8 A. M., and my rest is generally good."

April 8th, 1881.—I was called to see the patient, and found that he had, during the preceding week, been unable to swallow except in very limited quantities. April 16th, I introduced, with some difficulty, a No. 7 catheter, and fed

patient in this way. After passing catheter every day for a week patient swallowed much better, and was enabled to obtain sufficient nourishment. The mass of the tumor about the trachea was rapidly increasing, both in the larynx and around it. April 26th, 1881.—Feeding through the tube had become more difficult, and he had obtained but little nourishment during the preceding week. Death followed April 29th, 1881, quietly and without apparent pain; the tumor never ulcerated; it was first observed in 1879. Death occurred six and a half months after tracheotomy, from inanition and gradual infiltration and infection from carcinomatous growth in larynx and in neck.

It will be observed in the history of these cases that marked relief followed after tracheotomy; that life, in one instance of advanced carcinomatous growth, was made comparatively comfortable for six months; and in the other, that the patient is still alive, and in better condition than he was at the time of the operation, which occurred eighteen months ago—this case being a fibro-sarcoma of the larynx similar in character to the tumor of Mr. A., on whom extirpation was performed.

Tracheotomy should be an essential part of the operation of extirpation of the larynx, and I believe that it is very important that the patient should be permitted to recover from the tracheotomy before any further operative procedure. Tracheotomy is rarely followed by a fatal result, except as that result may be determined by the disease for which the operation is made, and yet it is not free from danger. It is especially dangerous in those who have suffered from difficult respiration, where the mechanical effort in breathing has been violent and the tension great. In aged persons the dangers of disturbance of nutrition in the lungs that are liable to follow tracheotomy are the same as those that would follow an extirpation for cancer. The soreness and difficulty in swallowing produced by the presence of the trachea tube is a very great annoyance to the patient, and very frequently produces a serious dis-

turbance of nutrition; but these dangers may be removed, in part, from the operation of extirpation of the larynx by a previous tracheotomy, which will certainly make the operation very much less formidable than it is supposed to be.

The history of these cases, together with those recorded by other operators with more extended experience, makes it evident that nothing is lost by this delay in the operation of extirpation, for not only is immediate relief to difficult breathing obtained by the operation, but the general condition rapidly improves after convalescence is established, and the local condition is much improved by the rest obtained by the tracheal opening. All inflammatory thickening about the tumor disappears, the irritation that accompanies it subsides, and there remains only the mechanical irritation of the mass of the tumor. The parts about the larynx assume a natural condition, except from the presence of neoplasm, and are in good condition for the more formidable operation of extirpation. The results of extirpation in the two cases here described are not very satisfactory. In the one case, for an epithelial cancer, the operation resulted in death on the fourth day; in the other the patient died six months after operation, having suffered a miserable existence during that time. He had failed to receive the relief by tracheotomy which should have followed this operation, because the attempt at tracheotomy resulted in a thyrotomy which did not possess the advantages of tracheotomy, and gave but little relief to the distressing symptom of dyspnea, but made deglutition uncertain, painful and disgusting on account of the escape of fluid through the tube, and the frequent strangulations caused by its passage into the larynx. I think that if tracheotomy in this case had been performed properly, the relief would have been as great and the immunity from death as prolonged as it was in the case of Mr. B., who is now living comfortably a year

and a half after operation. It is the experience of Fauvel that the local condition uniformly improves after tracheotomy. This fact makes it proper to disregard the general clinical fact, universally recognized, that all operations for cancerous tumors should be performed at the earliest possible moment. We have here an exception to this rule, and the delay necessary to tracheotomy and the recovery from its effects is a gain when the more formidable operation of extirpation is contemplated. Where the diagnosis of tumors of the larynx is as long delayed, as it is usually in cases presented to us now, tracheotomy will be more uniformly applicable than extirpation. Where the tumor is small, when it is discovered early, where it is innocent in its character, or an epithelial cancer, if it can be thoroughly extirpated I believe extirpation to be the operation that should be performed, but think that it should be an invariable rule to make a primary tracheotomy and wait at least a month before attempting extirpation. The limited lymphatic supply of the larynx makes constitutional infection very slow from cancerous growth in this locality, and the tumor usually kills, not from constitutional infection, but from its mechanical influence. In sarcoma, also, the tumor becomes large enough to be of serious mechanical inconvenience before the constitution becomes infected. In cases where extirpation is effective and permissible it offers permanent relief if successful; whereas the most sanguine operators give to tracheotomy the credit of prolonging life for only a comparatively short time, perhaps one, or at most two years. Extirpation for epithelial growth in the larynx will prove, I think, as effective a cure as that of excision for epithelioma of the lip, but attended, of course, with more danger, but not the degree of danger that might be inferred from the statistics of operators. It must be borne in mind that those cases that have submitted to extirpation have been those in whom the disease was far advanced, and generally in old men.

Foulis reports that fourteen out of twenty-six died within fourteen days where the operation was made for cancer, and the remaining twelve, who recovered from the operation, died within nine months. I do not think that these statistics, which are some of the latest that we have, indicate the true relative danger of extirpation and tracheotomy; nor do I think that any statistics now accessible can represent the true relative value of the two operations, nor their relative danger. The best cases for extirpation are not those that have been subjected to the operator. It is evident, then, that tracheotomy is more universally applicable than extirpation; that it is less dangerous; that the condition demanding relief uniformly improves after the operation; that the patient is made comparatively comfortable, so far as cough, dyspnea, swallowing and rest are concerned; and that it is applicable in many cases where extirpation should not be considered. After simple tracheotomy the patient has before him inevitable death approaching, and this is delayed, at most, only a few months, or a year. Whereas extirpation, performed with precautions herein indicated, and when the patient is not yet depressed by the cancerous cachexia, will, I believe, prove to be much less dangerous than is indicated by the statistics so far published. The anatomical and physiological relations of the larynx make it extremely probable that complete extirpation in the early stages of disease will make, in some instances, a permanent cure; and that extirpation, when thus performed, does not necessarily imply a total removal of the larynx. The operation, when made early, may in many instances leave the parts in condition for easy deglutition, and for at least partial use in vocalization.

A LARGE FIBRO-CYST OF THE UTERUS AND OVARIAN CYSTOMA, CO-EXISTING WITH PREGNANCY; OPERATION; RECOVERY.

By Walter Coles, M. D., St. Louis.

[*Reported to St. Louis Obstetrical and Gynecological Society, Oct. 19, 1882.*]

I HAVE here a fibro-cystic tumor of the uterus, which was removed by abdominal section. The case is one of unusual interest, and hence I trust I shall be pardoned for presenting it somewhat in detail. The early history of this case has been made the subject of a very interesting report by Dr. J. B. Cox, of Ste. Genevieve, Mo., and can be found in the St. Louis Courier of Medicine, March, 1882. The report of Dr. Cox covers the history of the case during pregnancy; gives an account of the labor, which occurred on the 26th of October, 1881, and of his suspicions of extra-uterine pregnancy then aroused on account of the unusual size and contour of the abdomen. Appended to this paper of Dr. Cox are some remarks of my own, wherein he requested me to present my views, diagnosis, etc. In order to present an intelligible history, therefore, I will be compelled to repeat in substance some points detailed at greater length in the journal referred to.

I first saw Mrs. H—— at Ste. Genevieve, Oct. 27th, 1881, in consultation with Drs. Cox and André. The occasion of my visit was to decide as to the nature of an abdominal enlargement which remained after the birth of a child thirty hours previously. I learned that the patient was enormously distended during the last month of pregnancy, and that the abdomen presented a peculiar shape. There was a central enlargement, occupying the position and of the same dimensions as those of a maturely pregnant uterus, while another similar tumor occupied the extreme upper right lateral portion of the abdomen. This tumor dis-

tended the right hypochondriac region to an extreme degree. In the higher portion of the abdomen, before labor, there could be distinctly made out a decided sulcus between the more central lower tumor and the upper tumor. During pregnancy the patient, who had already had three children, suffered at times unusual and agonizing distress in the lower part of the abdomen, resembling the pains of labor, only worse. The patient was quite sure that she felt motion in both tumors. In his published account of the case Dr. Cox says: "On placing my hands upon and enveloping the upper tumor, I could distinctly feel the fetal movements; and upon making the same test with the lower tumor, I could likewise feel, what I then had no doubt of, the movements of a second fetus. These tests were frequently made, at different intervals, and corroborated by herself, her husband and others; and upon them I predicted that she would have plural births."

After a most tedious labor, lasting three days, the patient was delivered of a remarkably large still-born child. With the birth of this child the tumor on the upper right side disappeared, leaving the abdomen of the identical size and shape found at the full period of gestation. After waiting some time and finding no disposition on the part of the uterus to expel its contents, and finding that there was some hemorrhage, Dr. Cox passed his hand within for the purpose of delivering the second child. To his surprise, however, he found the uterus empty, save the placenta, which he delivered with some difficulty, there being an hour-glass contraction. I should have mentioned that there was no suspicion of a tumor in this case, there being no indication of anything wrong prior to pregnancy. Under the circumstances it was not surprising that the physicians in charge should have suspected that there was an extra uterine fetus.

I examined the case carefully. On inspection, the abdomen presented much the same appearance as in the ninth month of gestation. By placing a hand on each flank and tightening the integument, the outlines of the tumor came

distinctly into view. It reached upward to a point midway between the umbilicus and ensiform cartilage, and was somewhat ovoid in shape, the long axis being slightly transverse in the abdomen. On the left the tumor was larger and extended well down into the pelvis. On inspection, as well as palpation, it seemed to be divided into three large lobes, the depressions or sulci between being very shallow, yet perceptible. The surface of the growth was smooth and dense; although decidedly elastic, there was no distinct fluctuation. The tumor was at that time, owing to the relaxation of the abdominal walls, quite movable. Nothing resembling the outlines of a fetus could be detected. The uterus was behind the tumor and could not be felt on external palpation. On examination *per vaginam*, I found a dense mass located in the left iliac fossa and blocking one-third of the entrance to the pelvic excavation on that side, so that the cervix uteri was somewhat displaced to the right.

I soon made up my mind that this was not a case of extra-uterine pregnancy, but some kind of morbid growth. My first impression was, that the tumor was a fibro-cyst of the uterus, and so expressed myself to Dr. Cox, but as it seemed to be attached to the left side, and bearing in mind the extreme rarity of such tumors, I qualified my diagnosis by the statement that this would be found to be either a fibro-cyst of the uterus, or a semi-solid tumor of the left ovary with a short pedicle. In either event, there was no indication for any surgical interference, so we decided to await developments. My advice was not to think of an operation until there was some decided indication for it. I was in hopes, inasmuch as the tumor had evidently sympathized with the developmental impulse of pregnancy, that it might rapidly diminish during the process of involution. There were indications, however, that the tumor had antedated this last pregnancy, although its presence had not been suspected. The fact that after the labor preceding the last, there was also an exceedingly troublesome hour-glass

contraction, was significant, and heightened the suspicion that the tumor was attached directly to the uterus.

The patient made a satisfactory recovery from her confinement, and visited me several times during last fall and winter. At each visit the tumor was examined, but no perceptible change could be clearly made out. The general health was excellent, although the presence of the tumor had a very depressing effect upon her spirits. Finally, in the month of April, the feet and ankles commenced to swell, and this decided the patient to be operated upon at all hazards. She came to the city in the early part of May, and was examined by Drs. Maughs, Gregory and Carson. We all concurred in the opinion that the case was unpromising for a successful operation, but as she earnestly desired to take the risk, it was determined that she should not leave without such aid as surgery might promise. Accordingly, a room was especially disinfected and prepared for the operation under the directions of Dr. N. B. Carson, to whose kind and efficient aid I am greatly indebted. At 11½ A. M., on May 14th, the patient being etherized, I proceeded to operate, assisted by Drs. Carson, Meyer, Moses, Jr., Briggs, Steedman and Frank Glasgow. There were present also, Drs. Gregory, Boisliniere, Maughs, Moses, Sr., and Dr. Glascock, of St. Joseph Lead Mines, Mo. Several phenol sprays were kept playing in remote parts of the room during the operation.

The abdominal incision was commenced high up near the umbilicus, and extended downward two-thirds of the way to the pubes. I then introduced my hand and ascertained that the tumor was firmly adherent to both sides of the pelvis; and by aid of the sound it was evident that the empty bladder was spread out high up on its anterior face. There were no other adhesions, as far as could be made out. The walls of the tumor were of a pinkish hue and full of interlacing blood-vessels; such was its elasticity that it seemed certainly to contain considerable fluid. On attempting to thrust a trocar into it, however, it was found im-

possible to do so without using undue violence. The wound made by the trocar bled freely. An exploring trocar was then passed in, and by moving the instrument the cystic character of the tumor was demonstrated; a few drops of serous fluid escaped through the cannula. A crucial incision was now made with a knife through the thick walls, and several fingers introduced into the interior of the growth, the cavity of which was ascertained to be filled with light gray flocculi and serum, resembling curds and whey. The walls were two inches thick; the inner lining being ragged and soft; each successive layer from thence to the surface being more and more dense and highly organized. Finding that the tumor could not be materially diminished by emptying its semi-fluid contents, the abdominal incision was enlarged upwards above the umbilicus, toward the pubes, to the dimensions of about ten inches. I then passed one hand behind it, and after satisfying myself that there were no adhesions to prevent, I lifted it up towards the abdominal opening, being aided in so doing by a finger of the other hand hooked into the front opening, also by a strong volsellum in the hands of an assistant; by means of some little force the tumor was thus delivered.

The attachments being thus for the most part pulled up outside of the abdominal cavity, we were enabled to work to better advantage. The tumor was ascertained to have sprung from the anterior face of the body of the uterus, a little to the left side; the uterus itself was slightly hypertrophied, the only portion of the front of the body not involved being a small arc of the fundus above the cornua. In its rapid development the tumor had carried up upon each side the anterior folds of the broad ligaments, which were both spread out upon its surface in a fan shape. Indeed, the whole of the anterior pelvic peritoneum was lifted well up upon the tumor, including the bladder, so that it was seated in a cup shaped bed, the center of which was represented by the utero-vesical *cul-de-sac*. It seemed impracticable to apply a clamp in this case, for fear

of involving the bladder, so that the only feasible method of procedure was by the process of enucleation. The capsule of the tumor was freely cut into, and its tunic torn and peeled off; this was done with great facility, until the tumor was freed from all its attachments, save the point from whence it sprung in the uterine wall; a strong double ligature of carbolized silk was passed through this and secured as in ovariotomy; the attachment was then severed and the tumor removed.

The capsule having been rapidly stripped off, the hemorrhage was less than might have been expected, considering its highly vascular condition. Nevertheless it was considerable, and this was temporarily controlled to some extent by numerous forceps, grasping the bleeding points. The tumor having been removed, the ragged edges of the sack from which it had been enucleated were trimmed as close as practicable to its attachments, and all bleeding vessels carefully ligated with carbolized silk, both ends being cut off close to the knot. The securing of the numerous points of hemorrhage in the large surface thus exposed was the most tedious and critical part of the operation. Dr. Steedman, who looked after the needles and ligatures, estimates that there were about forty of the latter employed.

The left ovary was found to be enlarged and to have undergone cystic degeneration; it was therefore deemed advisable to remove it, which was done, after securing the pedicle by means of a double silk ligature.

Having staunched all bleeding, thoroughly cleansed the abdominal cavity of blood clots, the external incision was carefully closed with silver sutures. A large glass drainage tube was left in the lower end of the wound, over the mouth of which a carbolized sponge was secured by means of gutta-percha tissue. The edges of the incision were sprinkled with iodoform, the abdomen was then covered with several thicknesses of cotton batting, and this secured by means of a snugly fitting flannel binder. The drainage tube with its sponge cap was held in place by an

extra strip of flannel seven inches wide, so as to admit of inspection without interference with the other dressings.

The operation, from the nature of the case, was necessarily rather a long one, occupying two and a half hours; and by this time the patient, who was in most excellent condition when placed upon the table, showed symptoms of profound collapse, rendering it necessary to resort to hypodermic injections of ether and brandy. She received also one-fourth of a grain of morphia under the skin before being removed from the table. She was then put to bed, surrounded by bottles of hot water and warmly covered with blankets. There were evidences of great shock at this time, the extremities being cold and the pulse flickering.

The following are the notes of the progress of the case. These notes are of intense interest to those who may have to watch a case:

May 14th, 3 P. M. One hour after being put to bed. Temp. 97°; pulse, 74 and feeble; respiration, 12. Deadly pallor, extremities cold. Injected hypodermic syringeful of brandy under the skin.

6 P. M. Temp., 97° in axilla; pulse, 140, feeble; pale, skin cold and clammy. Patient perfectly quiet and comfortable.

9 P. M. Temp., 96°; pulse, too feeble to count; respiration, 12. Extremities cold and moist. Patient complains of a sense of burning heat; asks for ice, which is sparingly allowed. Repeated the hypodermic injection of brandy.

11½ P. M. The condition unchanged. Brandy, hypodermically.

May 15th, 2 A. M. Temp., 96°. Patient is apparently moribund; limbs cold and clammy; pulse at the wrist almost imperceptible; is perfectly quiet and rational; repeated the brandy under the skin.

6 A. M. Temp., 96.5°; pulse still too feeble to count; resp. slow, sighing and irregular; deathlike pallor. Injected brandy.

10 A. M. Pulse, 130; temp., 97°; resp., 14 and sighing. Hands and arms cold and clammy. Patient asks for ice, but only small pieces are allowed. Brandy given hypodermically.

12 M. Pulse, 120, feeble; temp. in axilla, 97°, in vagina, 103°. Is somewhat restless; hands still cold and moist. Allowed a sip of milk with lime water, also ice in moderation, Gave hypodermic injection of ergotin, also one-fifth grain of morphia sulph.

5 P. M. Pulse, 120, stronger; temp., 98.5°. Reaction evidently setting in; abdomen slightly tympanitic. Changed dressing of drainage tube for the first time since operation, and sucked out, by means of gum tube attached to a small hard-rubber syringe, one and a half ounces of thick, dark, bloody fluid. The sponge over the tube was also full of bloody fluid.

10 P. M. Pulse, 120; temp., 101°; resp., 12 and sighing; hands still cool; sweating. Passed into the bowel a suppository containing 10 grains of quinine and 1 grain ext. opium. Has had a few sips of lime water and milk, with ice. Changed sponge on drainage tube, which is saturated with bloody fluid; sucked out with syringe one and a half ounces dark fluid containing leech-like blood clots.

May 16th, 5½ A. M. Pulse, 120; temp., 100.5°; resp., 14 and natural—no longer sighing or irregular. Hands warmer, better color about lips and face. Dispensed with hot bottles except to the feet. Changed dressing on drainage tube and sucked out one ounce dark blood.

10 A. M. Pulse, 126; temp., 101°; resp. somewhat irregular and sighing. The stomach becoming irritable, for the first time there is occasional retching. Patient restless and complains of her position in bed. Abdomen tympanitic, but not tender. Changed dressing on drainage tube; there has been considerable dark red discharge, saturating the sponge, and soiling patient's gown and the special bandage which holds the tube in position. Injected into the tube one-fourth pint of a solution of chlorinated soda,

of the strength of one drachm of Labarraque's solution to a pint of distilled water, and sucked it out again—it coming up very bloody. Administered one-fifth grain of morphia sulph. hypodermically; 10 grains of quinine was ordered to be given in 3 ounces of beef-tea, by enema.[1]

2½ P. M. Pulse, 124; temp., 101.5°. Patient restless and frequently retching; dislikes to take even ice by the mouth; complains of being cold.

5½ P. M. Pulse, 130; temp., 102°. Exceedingly restless and despondent; disposed to throw herself about in bed; constant retching. Washed out the cavity, and inserted a cork in the mouth of drainage tube, to prevent further soiling of bed and dressings.

10½ P. M. Pulse, 126; temp., 101.7°; less restlessness and less retching. Abdomen tympanitic; passed a large gum catheter into rectum and much flatus escaped. Washed out cavity. On first removing the cork from the drainage tube, I would suck out carefully all the retained fluid, which for the first few days came up thick and clotty. I then very gently threw in a syringeful (three ounces) of disinfectant wash, and drew it out again. This process was repeated several times, until the fluid came out less tinged with blood. The idea was to dissolve all blood clots, and get rid of them as quickly and thoroughly as possible.

May 17th, 5½ A. M. Pulse, 124, good volume; temp., 101°. No further disposition to retch or vomit. Passed rectal tube, causing considerable escape of flatus. Washed cavity. Patient quiet and cheerful.

11 A. M. Pulse, 122; temp., 101°; respiration normal. Washed cavity.

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[1] I will state here, by way of avoiding repetition and saving time, that, from this time on, opiates were given only as required; sometimes hypodermically and sometimes in the shape of a suppository with quinine. The rectum retained the enemata of beef-tea well, and they were kept up regularly every four hours. This was always a convenient vehicle for medication when it seemed indicated, and thus the stomach was largely spared during the critical period.

5½ P. M. Pulse, 104; temp., 101.2°. Is somewhat sensitive over the abdomen, which is less tympanitic. Inclined to be restless; dislikes the dorsal decubitus, and insists on turning in bed. Washed cavity, the fluid still coming up very bloody, with occasional dark clots.

10½ P. M. Pulse, 106; temp., 101.2°. Is restless and has a weary look. Complains of the bladder, which has to be emptied by the catheter every four or five hours. Washed cavity.

May 18th, 6 A. M. Pulse, 100; temp., 101.2°. Patient feels better, although she has spent a restless night. Intolerant of more than four ounces of urine in bladder. Very little blood in drainage tube; water injected comes out nearly clear and with no perceptible odor.

11 A. M. Pulse, 108; temp., 102°. Changed dressing on the external wound, and removed superficial silk stitches between the wire sutures. Little or no tenderness or tympanites. Washed out cavity.

5 P. M. Pulse, 112; temp., 101.7°. Patient is excitable and restless. The tongue has been more or less dry since the operation. Ordered more abundant nourishment by the mouth.

10 P. M. Pulse, 112; temp., 101.6°. Restless and wakeful; continually shifting her position in bed. Ordered more morphine and less quinine, as the latter seems to excite her. Washed cavity, the fluid coming up less bloody at each washing.

May 19th, 7 A. M. Pulse, 104; temp.. 100°. Some vesical irritation. There is a bloody discharge from the vagina. Is still inclined to be restless. Complains of soreness in lower part of abdomen, which is not especially tympanitic. Washed the cavity, the discharge from which has greatly improved in quantity and quality. Patient is partaking liberally of liquid nourishment.

5½ P. M. Pulse, 100; temp., 100.4°. In moving in bed the patient has displaced dressings, and pulled out the drainage tube; inserted in its place a few inches of rubber tube;

the discharge is less in quantity, pinkish in color, and devoid of odor.

10½ P. M. Pulse, 104; temp., 101.8°. The bowels have been freely moved by an enema of warm salt water. Considerable pinkish discharge from drainage tube.

May 20th, 7 A. M. Pulse, 108; temp., 101.8°. Has been flighty during the night; is excitable and talkative. Feels hungry, yet takes little food when offered. Free flow from drainage tube.

10½ P. M. Pulse, 100; temp., 101.4°. More comfortable in every way.

May 21st. Pulse, 98; temp., 100.8°. Appetite improving. Tongue still dry. There is less discharge from drainage tube. Countenance natural, though beginning to look somewhat emaciated. The discharge from the abdomen being slight, the rubber drainage tube is removed. Ordered an enema, which operated well.

May 22nd, 7 A. M. Pulse, 96; temp., 100°. Has considerable pain and swelling in left parotid gland, otherwise more comfortable than at any time since the operation. Removed most of the stitches in abdominal incision.

6 P. M. Pulse, 112; temp., 103.5°. Inflammation in parotid developing rapidly. No apparent abdominal disturbance. Has passed water naturally for the first time since the operation.

May 23rd, 10 A. M. Pulse, 96; temp., 99.8°. Swelling of parotid about the same; no other symptoms.

May 24th, 10 A. M. Pulse, 90; temp., 99.2°. Tumefaction of the parotid rapidly subsiding. The patient is removed down stairs from the operating room to her chamber.

May 25th. Pulse, 90; temp., 99°.

May 26th. Pulse, 88; temp., 99°.

May 27th. Pulse, 90; temp., 99.1°.

May 28th. Pulse, 90; temp., 99.4°. The swelling of parotid has entirely subsided; the patient, however, is depressed in spirits.

May 29th. Pulse 86; temp., 100.7°. Abdomen slightly tympanitic. Bowels moved by enema.

May 30th, 10½ A. M. Pulse, 98; temp., 102.7°. Some tenderness on percussion, over the right hypogastrium. No tenderness or abnormal indications on examination per vaginam.

May 31st, 10½ A. M. Pulse, 92; temp., 103°. Complains of soreness midway between the umbilicus and superior spinous process of right ilium. Abdomen tympanitic.

June 1st. Pulse, 90; temp., 100.5°. Abdomen tympanitic; patient restless and depressed. Great soreness in the right hypogastric region; there is fullness, but no fluctuation or tenderness in side of roof of vagina, in the region of the right broad ligament. Ordered a dose of castor oil and spirits of turpentine internally, and the application of hot poultices externally.

June 3rd. Pulse, 110; temp., 103.5°. Tongue dry; great tympanites and tenderness in the lower part of abdomen, extending to both sides. The poultices are kept up with full doses of quinine and brandy, together with sufficient morphine to insure quietness.

June 6th. Patient continues about in same condition, is evidently suffering from septic fever; the right parotid gland is now swelling as did the left. The temperature is again at 103.5° to-day, and this seems to have been the culminating point in the patient's convalescence, for on the next morning (June 7th) a free discharge of fetid pus was established through the former site of the drainage tube, which was promptly marked by a subsidence of all untoward symptoms. At the end of ten days, however, the patient had a return of fever, with the formation of an abscess in the left side of the pelvis; this finally discharged through the former opening, which had been kept patulous. This was succeeded by a third abscess, which opened into and discharged freely from the bowel. From this time on all trouble ceased, and the patient gained rapidly in health and strength, so that by the latter part of July she was able to return to her home. There has arisen no unfavorable symptom since her return. I am informed

that the patient is in perfect health, and has fully resumed her household duties.

It is of only comparatively recent date that fibro-cystic tumors of the uterus have been recognized and attracted the attention of surgeons, and even now, with our improved methods of diagnosis, it is exceedingly difficult, if not impossible in many cases, to differentiate them from ovarian tumors. So far as I know, there are no satisfactory statistics of the operation for subperitoneal fibro-cysts. As compared with ovarian tumors they are exceedingly rare, and it is agreed by all authorities that the hazard attending their removal is far greater than in ovariotomy. The shock is more profound, and where the attachment or pedicle is broad the risk of hemorrhage is more grave. We are speaking of course as to the rule; there are cases where the pedicle is as small and as easily managed as in the simplest ovariotomy. But in cases like the one I have just related, where there is no pedicle, and where the only recourse is by the method of enucleation, the danger is extreme; indeed, it is only since we have become bolder in abdominal surgery that such cases would be considered operatable. In these cases the surgeon is hemmed in by mortal dangers on all sides: if the operation is inordinately prolonged, his patient will sink from shock; whereas if he does his work hurriedly or imperfectly, death is equally certain from hemorrhage, septicemia or peritonitis. All depends upon the thoroughness with which every point connected with the operation is looked after, the preliminary preparations and the after management being no less important than the operation itself.

The important evidence of Dr. Keith will weaken the faith of the profession in the carbolic acid spray, but if there is any advantage in it, my patient got the benefit of it; certainly it did her no harm, for there was never any serious peritonitis, and no excessive rise of temperature, except when the parotid glands became inflamed. But while Dr. Keith has discarded the spray, he is none the

less strict in observing antiseptic precautions, including thorough cleanliness with drainage whenever it is required; stringent attention to these matters being doubtless the chief factor in his wonderful success. Without the drainage tube, and without the systematic and frequent washing out of the abdominal cavity in the case we are considering, I am sure there would not have been a ghost of a chance for recovery. The amount of blood which can be sucked up and washed out of this cavity, would surprise one who has never tried it. The first ovariotomy I ever performed was during the late war, and although my patient recovered, I well remember how anxious I was for some means of better drainage, which was then unattainable. The principle of drainage promises to gain in favor, and will undoubtedly lead to still more brilliant results. Whenever we are in doubt, I would say that it is a good plan to resort to the tube, it being easy to remove it, if not needed, and very difficult to introduce one secondarily. I have regretted not using the tube, but never found it productive of mischief. Even after the tube has been withdrawn and the opening closed, the fact that it has been worn for a while seems to guide the pointing of secondary abscesses in the right direction, for in a large majority of instances the discharge takes place at the site of the tube.

When the patient is restless and the discharge free, it is preferable to close the tube with a clean well-fitting cork, rather than by the sponge-cap and rubber tissue. The cork is simpler and less liable to be displaced, involving the soiling of the clothes, bedding and abdominal dressings. The cork can be readily removed (the frequency with which this is done depending on the freedom of the discharge), and the retained fluids gently sucked out by means of a 3 oz. hard-rubber syringe. If deemed desirable, the cavity can at the same time be washed out. When these manipulations are gently performed, and if the wash is of proper temperature and strength, the patient is scarcely conscious of what is being done, so little pain does it produce. I am

satisfied that washing out the cavity often has a markedly soothing and quieting effect. There is probably no indication for antiseptic washes before the third day after the operation; in the meantime active changes have gone on within the cavity, and if the case is progressing at all favorably, abundant plastic lymph has been thrown out—a temporary *bulk-head* has been formed which effectually cuts off the lower portion of the abdominal cavity from the upper portions. Fluids thrown into the cavity do not therefore flow promiscuously among the viscera, carrying taint where there was none, but go directly to the spot where they will do most good, and are confined to that neighborhood, hence the amount of fluid which can be thrown in at any one time is sometimes exceedingly small. In the case under consideration I found that I could inject three ounces with ease, but when I refilled the syringe, the fluid overflowed the tube before I could empty it a second time, and at the moment of overflow the patient would sometimes mildly complain that it hurt her. This was the signal for sucking the fluid out again; at first it came up very bloody, but by repeating the same process a number of times it became more clear. Finally, at the end of five days, the last washings came up quite free from color.

It is very desirable that the tube should reach to the most dependent portion of the cavity, hence the importance of placing it in position at the time of the operation. When the glass tube is accidentally pulled out, or for any other reason it is desirable to substitute one of rubber, it is rare that we succeed in introducing it without difficulty. Unless the gum tube reaches to the bottom of the *cul de sac*, it will not act as a syphon in returning the fluid injected. Nevertheless, even a short tube is valuable for purposes of drainage, especially if the patient turns occasionally on to the side.

The manner of closing the external incision is a matter of no inconsiderable importance. Dr. Keith declares that he is as careful in sewing it together as though it were a

wound of the face. It will not do to rely on the deep stitches alone, no matter how closely they may be placed, for the reason that the skin on one side or the other is apt to be tucked in, when the sutures are twisted or tied, and whenever this occurs the infolded skin unites quickly with the inner or peritoneal surface of the opposite side. The result is that union is necessarily imperfect, and when the stitches are removed, one lip of the incision juts out, and slowly heals by granulation. This is not only an unsurgical accident, but it leaves the abdominal wall weakened at that point. In closing the incision, superficial silk stitches should be inserted between all the deep sutures, and care taken that the infolded skin is hooked up by a tenaculum, and secured in precise apposition to the opposite side. When this is carefully done, perfect union by first intention will almost surely follow.

TINNITUS AURIUM.

BY D. C. GAMBLE, M. D.

[*Read before the St. Louis Medico-Chirurgical Society, Oct., 1882.*]

NO other single symptom connected with diseases of the ear possesses greater interest for the otologist than tinnitus aurium. From its very common occurrence, and its intractable resistance to treatment, it has tended to cast no little discredit upon otology, and to bring into disrepute the labors of the aurist. This has been owing no doubt, to a great extent, to the fact that its being a symptom was continually lost sight of, and it was looked upon as a disease of itself. This is especially true of the laity, for it is no uncommon thing for them to complain, not of the loss of hearing which usually accompanies the tinnitus, but of the noise alone, regarding it as the disease from which they are suffering. So far as they are concerned,

there may be some justification for their error, when we remember that it, the tinnitus, may be so distressing as to mask all other trouble, and may so work upon the nervous organism as to produce loss of reason, and lead even to the commission of suicide.

Much of the doubt and uncertainty which surrounded this symptom has been cleared away; still there remains much which requires patient, careful investigation.

In entering upon this subject I am well aware that I am passing over ground which has already been gone over by others far more competent than I, and whose experience and opinions are of far more value than mine, so that I crave your indulgence while discharging the duty devolved upon me by your executive committee.

In the human organism there is a chain binding the organs together in such intimate relationship, that their influence over each other is to a large extent reciprocal; and when one member suffers, the others suffer with it. Within the circuit of this influence, and at its summit, stands the organ of hearing, and nowhere is reflex action more beautifully illustrated than in the conditions which are supposed to give rise to the symptom now under consideration. Bearing this relationship in mind, aurists have been enabled to arrive at pretty correct conclusions as to the sources of this distressing trouble, and these have been borne out, it is claimed, by the treatment based upon them, for it has been successful to the degree, at least, of so modifying the tinnitus that it is no longer regarded.

That I may not be wearisome I shall briefly enumerate only a few of the diseases which are held to give rise to this symptom. We find that it may be present in affections of the external meatus, such as hardened cerumen, diffuse inflammation, eczema, fungi, etc. In cases of hardened cerumen, the pressure of the mass upon the membrana tympani, carrying before it the ossicles, and forcing the foot plate of the stapes into the oval window, thus exerting undue pressure upon the contents of the labyrinth,

is the usual explanation of the noise. But there are still others, one of which is that the mass, acting as a foreign body, excites an irritation which is reflected to the otic ganglion, and to the tensor tympani muscle, which is supplied by a branch from this ganglion. By the contraction of this muscle, thus induced, the ossicles are drawn inward and pressure made upon the labyrinth as above. It is held by Woakes, that as the strong contraction of a muscle is accompanied by sound, so here the note caused by the contraction of this one, small though it be, produces the tinnitus complained of. Still another cause for the noise may be, that the mass, by closing up the external meatus, forms a reverberatory cavern of the tympanum, and by preventing the exit of sounds from the ear causes them to be thrown back upon the membrane.

In almost all of these cases, however, it will be found that some trouble exists in the naso-pharyngeal region and Eustachian tube, which will undoubtedly have more or less influence in the production of the noise.

In cases of diffuse inflammation of the meatus, tinnitus may be present, though it is not invariably so; and as the cavity of the tympanum and the external meatus are separated only by the delicate membrana tympani, which is itself often involved in the inflammatory process, the question may arise as to how much of the tinnitus is due to vascular disturbance in the cavity which has extended from that without. But be this as it may, it may be accounted for by the explanation already given, and in like manner the action of foreign bodies, eczema and fungi, may be explained.

Von Tröltsch relates a case of continuous noise in the ear, which after death was found to be due to a grain of barley impacted in the Eustachian tube.

While tinnitus may accompany any of the affections of the external meatus, it is not apt to be permanent, but usually subsides with the disease which gave rise to it, but it is in affections of the tympanic cavity that it finds its

most frequent expression. Here too it is more likely to be permanent from structural changes which take place. In both acute and chronic troubles in this region it is usually present; and Dr. Sexton says that in the former, not infrequently, its manifestations are so marked that patients refer to it as pain. In these diseases the hyperemia of the parts undoubtedly plays a prominent part in the production of the tinnitus. In the acute variety, the rush of the blood through the distended vessels causes their vibration, which is communicated to the air contained in the cavity, in the early stages, and when secretion has taken place to the latter. These vibrations can frequently be noted in cases where a small perforation exists in the membrana tympani, as they are propagated to the contained fluid. In chronic cases the vessels remain in a dilated condition from loss of their natural tonicity, and the air in the cavity responding to their vibrations serves as the medium for their transmission, and if to this condition closure of the Eustachian tube be added, another factor exists to favor their still further distension. For by this closure of the tube and consequent absorption of the air natural to the cavity, the vessels are deprived of the support which its presence gives. In consequence of the want of proper ventilation a retraction of the membrane ensues. Woakes states that he does not regard this retraction as a vera causa of tinnitus, and relates a case in support of his view, where there was retraction to such an extent that the membrane was in contact with the promonotory, and yet there was no noise. If, however, pressure of the stapes upon the labyrinthine contents can ever be considered as a factor in the production of tinnitus, it does not seem unreasonable, under the conditions of the cavity just given, to attribute to it some part at least in the causation of the noise.

But Burnett, in his treatise on the ear, says that Prof. Politzer had informed him that he had traced the connection between the vascular tracts of the middle ear and those of the internal ear. By this vascular communication

then, the tinnitus which accompanies diseases of the middle ear can readily be accounted for, for it needs only an extension of the congestion from the one part to the other, in order that a direct effect upon the auditory nerve may be produced, the vibrations of the vessels being communicated directly to the terminal filaments of the nerve.

It is in the production of a hyperemic condition of the internal ear that affections of remote organs exert their influence. This they are supposed to exercise through the cervical ganglia. The internal ear receives its blood supply from the internal auditory, a branch of the basilar, formed by the union of the two vertebral, the stylo-mastoid from the posterior auricular, and occasionally branches from the occipital (Gray). From the inferior cervical ganglion filaments are given off, which unite with those from the second ganglion, forming a plexus around the vertebral, and accompanying it throughout its course to the parts which it supplies. The occipital and posterior auricular are branches of the external carotid, and with other branches from the same receive filaments from the first cervical ganglion. From each of these ganglia branches are given off, which either pass directly to the organs of the chest, or joining with other nerves, as the pneumogastric, are distributed with them to the parts they supply. The abdominal and pelvic organs are included in the chain by means of the splanchnic nerves, and by branches from the lumbar and sacral ganglia. It will thus be seen that the ear is brought into intimate relationship with the other organs, and it can be easily understood how affections of these organs may produce such a disturbance as will lead to tinnitus.

Not to detain you, I will only mention that tinnitus may be present in affections of the lungs, as phthisis pulmonalis; of the heart, as endo-carditis; of the stomach, as the different forms of dyspepsia; in affections of the kidneys, as Bright's disease, and affections of the uterus. Baratoux mentions cases where tinnitus occurred at each menstrual

period, beginning two or three days prior to the flow and lasting until it was established.

Before leaving this subject I would like to call your attention to the fact that tinnitus arising from the use of quinine is due to hyperemia of the internal ear, and in this connection mention the results of some experiments made by Kirchner, and published in the *Central Blatt für Chirurgie*, No. 9, 1882. His experiments were made upon dogs, cats, rabbits, guinea-pigs, rats and mice, with muriate of quinine and salicylate of soda: 1 to 3 grams (grs. xv–xlv.) of each, in 2 oz. of water, were introduced by a tube into the stomach in quantities varying with the size of the animal, and a solution of 6 centigrams to ½ gram was used subcutaneously. On making an examination the following conditions were found: There was much hyperemia of the osseous portion of the external meatus in the vicinity of the tympanum; the membrana Schrapnelli was distended, and of a shining red color, with a portion protruding of the size of a hemp seed. On puncturing this, a medium quantity of reddish fluid escaped. The membrane of the middle ear was opaque and yellowish, and in some places small points of extravasated blood were seen. In the labyrinth, in some of the cases, the lining membrane appeared intensely congested, especially on the inner side of the stapes. The fluid of the labyrinth, in some of the cases, was tinged red; that in the first turn of the cochlea, near a distended tortuous vessel, was bloody in color. The theory that quinine is eliminated in the internal ear, and by its presence causes mechanical irritation, was not sustained. The idea of the experimenter is, that large doses of these drugs, muriate of quinine and salicylate of soda, produce a vaso-motor disturbance of the internal ear, agreeing with Woakes, who attributes to quinine a paralyzing influence over the inhibition of the inferior cervical ganglion.

Much more might be said on the subject, and other causes for the trouble given, but this will suffice to bring it to the attention of the society.

Those familiar with the literature of the subject will perceive that in the preparation of this paper I have drawn largely from the works of Woakes and others, and to them I would make my acknowledgements. For the points in Kirchner's experiments I am indebted to the courtesy of my friend Dr. Frank Glasgow, of this city.

ON THE INTERMITTENT CONDUCTION OF SOUND THROUGH THE CRANIAL BONES.

By J. A. Andrews, M. D., New York.

ALTHOUGH it is not the specific purpose of this paper to discuss the value of the tuning-fork as a test of the perceptive capacity of the auditory nerve, but rather to record a few cases illustrating the occasional intermittent character of the perception of osseous vibrations, at one time much diminished and after a certain period increased, varying from time to time in the course of treatment, with improvement or aggravation in the diseased condition; nevertheless, a brief prefatory reference to the physiology of audition, and the theory upon which is based our knowledge of differentiating between disease of the middle ear and that of the auditory nerve, may not be inappropriate.

The simplest organ of hearing is found in the crustacea, in which animals it consists of a simple membranous sac filled with fluid and lined on its inner surface with epithelium, from which fine, regularly arranged hairs project into the fluid. This epithelium, capped with its hair-like appendages, receives the terminations of the acoustic nerve. This simple ear is found only in connection with a dense skeleton; and the wisdom of the provision is apparent. There is neither tympanum nor external auditory canal in this form of life. The sound waves, falling upon the hard parts of the

head, are carried to the fluid in the sac, and vibrations are excited in the hair-like processes or nerve endings just described, thus giving expression to the sensation of sound. Were the dense skeleton absent in this simple ear, the vibrations, there is reason to suppose, would not be sufficient to influence the nerve. We have, therefore, in this primitive form of life, the organ of hearing constituted of a vestibule alone. In the higher animals this simple membranous sac is developed into the complex arrangements of the labyrinth. There are here, in addition to the vestibule, the semicircular canals and cochlea. The membranous labyrinth in man is also a closed sac filled with fluid, the ramification of the auditory nerve being distributed upon its walls. In addition to the labyrinth, air-breathing animals, including man, are provided with an external and middle ear. This membranous sac is also inclosed in a bony structure, the osseous labyrinth; and the latter leads into the middle ear by two openings, the oval and round windows, which are closed by the lining membranes common to both cavities.

A simple and inexpensive experiment will show that sound waves in passing from air directly into water suffer a considerable diminution of their strength; while, on the contrary, if a tense membrane exists between the air and the water, the sound vibrations are communicated from the former to the latter with great intensity. We have in this fact at once an explanation of the use of the membrane closing the round and oval windows. Johannes Müller[1] has shown that a solid body, fixed in an opening by means of a border of membrane so as to be movable, communicates sonorous vibrations from air on one side to water on the other side much better than solid media not so constructed. But the propagation of sound is rendered still easier if the solid conductor thus occupying the opening is fixed by its other end to the middle of a tense membrane which has at-

[1] Müller's "Physiologie," Bd. ii.

mospheric air on both sides. These facts further explain the use of the Eustachian tube in furnishing air to the middle ear, and of the chain of movable ossicles traversing the cavity of the latter, connecting as they do the membrana tympani with the membrane occupying the opening leading to the vestibule of the labyrinth. In man sonorous undulations may reach the peripheral terminal branches of the auditory nerve in the following ways:

1. They may be transmitted through the medium of the air to the membrana tympani, the vibrations of which are communicated to the fluid of the labyrinth through the malleus, incus and stapes, and the membrane of the oval window. This is the so-called "*aerial conduction*" of sound
2. They may reach the nerve by the cranial bones, either from *direct* contact of the vibrating body, or by the sound waves reaching the surface of the head through the air. In either case the vibrations are propagated principally to the osseous walls of the tympanum and external auditory canal, whence they are transmitted to the membrana tympani, to the ossicles, and to the air contained in the external auditory canal and tympanum, and by these media reach the fluid of the labyrinth through the foramen ovale.

The original explanation given for the fact that a tuning-fork is so well heard from the cranial bones was, by the supposition of a direct transmission of the sound waves to the labyrinth. This view is not wholly correct. The experiments of Politzer[1] and Lucæ[2] have demonstrated that a tuning-fork, held vibrating on the cranium, sets the ossicles and membrana tympani in vibration. Although we cannot deny the possibility of a direct transmission of sound to the terminal fibers of the auditory nerve in the labyrinth through the cranial bones, without participation of the sound-conducting apparatus of the middle ear, the bone conduction incontestably reaches the labyrinth essentially through this latter medium. This physiological

[1] Untersuchungen über Schallfortpflanzung, "Arch. f. Ohrenheilk," i. p. 73

[2] Untersuchungen über die sogenannte Knochenleitung, ibid.

process is what is known as "*bone conduction;*" but it might be more correctly expressed by the term *cranio tympanic conduction*, in contradistinction to *direct* bone conduction. We do not know to what extent *direct* bone conduction elicits a sensation of sound; but Lucæ[1] has recorded a case which furnishes incontestable proof that direct bone conduction is possible. In this case, on the right side there was no external auditory canal, no middle ear, no labyrinth windows; the auditory nerve and cochlea, however, were in normal condition. The left ear, on the other hand, was normal in structure, and of normal hearing power. The right ear, therefore, was practically in the condition of the ear of the lower fishes described above. The watch was not heard on the right side through bone, but a bell, tone á, applied to the head on the right side, was heard very well, but weaker than on the left or normal side.

The first-instanced channel of transmission of sound to the auditory nerve, i. e., *aerial conduction*, is the common mode of hearing in man, and the impression thus produced on the nerve is, in a normal state of the hearing power, decidedly more powerful than osseous conduction. A simple experiment on ourselves, provided our middle ears and nerves are unaffected, will demonstrate this.

Place a vibrating tuning-fork on the vertex or between the teeth; the instant the sound ceases to be heard from these points, hold the fork close to the ear, but not touching it, and the vibration will be heard again. If we now reverse this experiment, and first hold the tuning-fork close to the ear for a moment, and then at once transfer it to the vèrtex, it will be heard clearly, but by no means as loud as in the first instance, when it was held close to the ear, i. e., aerial conduction, which proves that in this latter way the maximum amount of impression is produced on the nerve. If while the tuning-fork is held on the vextex,

[1] Anatomische-physiologische Beiträge zur Ohrenheilkunde, "Arch. f. path. Anat. u. Physiologie. u. f. Klin. Med." xxix., case 2, p. 62.

we gently[1] close the external auditory meatus of one ear with the finger, the sound will be heard very much louder than in the open ear, even though the tuning-fork be held over the mastoid process on the side of the open ear. This simple experiment has been turned to practical account, and furnishes us with a basis for the application of the tuning-fork for purposes of differential diagnosis between an affection of the labyrinth and one of the middle ear.

The increased loudness of the sound on the occluded side has been explained to be due[2] to increased resonance of the external auditory canal, and reflection[3] upon the membrana tympani and ossicula auditus of the sound waves that have passed from the cranial bones to the air in the external auditory canal; and to the prevented escape of the sound waves which have reached the labyrinth and tympanic cavity. Lucæ's[4] explanation of an increased intra-auricular pressure cannot be accepted, inasmuch as the sound is also intensified if the palm of the hand be arched and held over the ear. According to these views, the increased resonance observed when the ear is closed results from the reflection from the cranial bones upon the nerve of the vibrations which have passed to the air in the external auditory canal, and in consequence of their escape from the labyrinth being prevented. The same effect that is produced by stopping the ear with the finger is also brought about by any cause that interferes with the oscillating power of the membrana tympani or the chain of ossicles; i. e., retraction of the membrana tympani caused by increased atmospheric pressure on the outer surface of the membrane, as in obstruction of the Eustachian

[1] If the finger be forcibly pressed into the meatus, the perception of the tone will be diminished instead of increased.

[2] A. Rinne, Beiträge zur Physiologie des menschlichen Ohres, Prag Vierteljahrschrift, i., ii., 1855.

[3] Politzer, "Arch. f. Ohrenheilk," i , p. 328.

[4] "Arch. f. path. Anat. u. Physiol. u. f. Klin. Med," xxv., p. 339.

tube (by long closure of the lumen of this tube—as in catarrh of the middle ear—a resorption of the air in the tympanic cavity takes place, and the external air pressure forces the membrana tympani and ossicles inward), adhesions between ossicles, especially between the plate of the stapes and the margins of the foramen ovale. Here the same cause which diminishes the aerial conduction—in other words, prevents the propagation of sound through the membrana tympani and ossicles—also effects an obstruction to its exit.

Therefore, in disease of the middle ear, the vibrations of the tuning-fork or watch, especially the former, applied to the cranium, should be heard with increased intensity in that ear in which the aerial conduction is diminished; or in case of disease of both ears, the vibrations should be heard on the side of most defective aerial conduction, provided the labyrinth be not at the same time also affected, in which latter case the perception of sound through bone would be reversed. To this rule there are exceptions, and it is the object of this paper to contribute illustrative cases.

The intensity of sound, as conveyed through the cranial bones, may alternate in the same individual, the bone conduction for the watch and tuning-fork be less distinct or even obliterated, and the cause have its seat in the tympanum.

Adam Politzer[1] has recorded a case which proves that the obliteration of the bone conduction may be due to middle-ear disease.

The patient was a girl, aged fifteen years. After several days of high fever, an extensive effusion occurred in both drum cavities, consisting of a thick, purulent exudation, with almost complete deafness. The perception through bone was entirely obliterated, but returned in the left ear at once after inflation, the presure upon the labyrinth window being thereby relieved by the removal of the exudation from this part.

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[1] "Arch. f. Ohrenheilk," i., p. 340.

Lucæ,[1] Wendt,[2] E. Politzer[3] (of Pesth), and other observers, have also recorded cases which exhibited similar symptoms; but I do not find that this subject received much attention from otologists until quite a recent date, when Bürkner[4] contributed a highly interesting and valuable paper on intermittent bone conduction. When this author's paper appeared, three years ago, I had already observed several of these cases, and was then engaged in experimenting for the purpose of explaining the cause of the intermittence, conducting my experiments in a somewhat similar way to those of Professor Adam Politzer, which were done for physiological purposes. In my examination of the cases to follow, the hearing power was tested with a watch of a mean normal hearing distance of about fifty inches. In testing the bone conduction, the watch was applied to the mastoid process, temple, glabella, vertex, and between the teeth; but I have only indicated the condition of the sound perception as noted when the watch was applied to the mastoid process and between the teeth, because the vibrations pass from these points through good conducting media in the most direct way. A C tuning-fork was employed. I have selected typical examples, and shall indicate only the essential points.

OTITIS MEDIA PURULENTA.

Case I. B. P., aged 18 years. One week ago patient took "cold in the throat;" swallowing was difficult and painful; had high fever. On the second day of his illness pain developed in his left ear; he could not sleep for three nights on account of "earache."

Feb. 21, 1879.—To-day the pain in left ear is much less but he now complains of pain in his right ear. Both tonsils are greatly enlarged and very red; the pharynx is also very red and secreting profusely. Left drum membrane

[1] Ibid., ii., p. 81.

[2] Ibid., iii., p. 61, case 3.

[3] Ibid., i., p, 48.

[4] K. Bürkner, ibid., xiv., p. 96.

[5] Ibid., i.

very much injected in its upper half; there is a small perforation in the postero-inferior portion; pus in external auditory canal.

Upper half of right drum membrane is much reddened and swollen, the injection extending down handle of malleus. H. D, L. E., w.,[1] *ad concham;* R. E. 6″; whisper, 4 feet; T. F. between teeth, heard faintly in either ear, but better in right ear. On the right side the watch is not heard from any point of the skull, not even when the right meatus is closed; heard faintly in left ear from the mastoid process only. Politzerization easy on left side. Catheter has to be used on right side. After inflation, H. D., L. E., w., 3 feet; R. E., no perceptible movement, although patient says he thinks he hears the watch tick a little better in this ear *ad concham* than before inflation. T. F. is heard better on left side.

Feb. 22.—Patient applied two leeches to each ear yesterday. The bleeding continued for nearly half an hour after the latter had dropped off, and patient fell into a quiet sleep, which continued through the night. There is no pain this morning, although the tinnitus still continues, and is more noticeable in the right ear than it was yesterday, perhaps because the pain which predominated yesterday in this ear diverted his attention from the noise. After inflation with the catheter, the patient exclaimed, "Why, the noise is gone!" However, this was not the case, although it had been greatly diminished; after fifteen minutes patient thought the tinnitus had returned in the right ear, but by no means as loud as before inflation. No other tests were made at this visit. Throat sprayed with solutio tinct. ferri chlor. cum potass. chlorat. Ordered left ear to be syringed with a warmed solution of boracic acid.

Feb. 25th.—Right drum membrane is less red and swollen. H. D., R. E., w. 2″, whisper, 8 feet; L. E., w. 8″, whisper, 15 feet. Bone conduction is present only in the faintest degree on the right mastoid process and between the teeth. T. F. held between the teeth is heard better in the right ear.

March 2d.—Patient has been seen every day since the 25ult. There is no discharge in the external auditory canal. There has been no tinnitus aurium for the past two days. H. D., R. E., w. 20″; L. E., w. $13\frac{1}{2}$″. Watch heard over the

[1] Hearing distance, left ear, watch.

right mastoid process. T. F. between the teeth is heard better in the left ear. After inflation the left external auditory canal contained a small amount of pus, which had been blown through the perforation in the drum membrane by inflation; the watch is now heard at 15″.

March 4th.—H. D., R. E., w. 31″; L. E., 22″; watch over right mastoid normal, heard faintly over left mastoid. After inflation the watch is heard through bone equally well from either temporal bone. After the subsidence of the acute symptoms, levigated boracic acid was blown every other day into the tympanic cavity through the perforation in the drum membrane, by means of my powder blower.[1]

March 10th.—To-day the perforation in the left drum membrane is healed. The membrane is still injected in its upper part. Patient remained ten days longer under treatment, at the end of which time the hearing distance for the watch was as follows: R. E., 42″; L. E., 37″. The perception through bone is normal There is no tinnitus.

In the foregoing case we must account for the temporary absence of perception through bone for the watch, and the diminution in the sound of the tuning-fork on the left side, where the aerial conduction was less, entirely upon mechanical principles, *i. e.*, the presence of purulent material in the tympanic cavity, which exerted pressure upon the labyrinth windows, causing an increased intra-labyrinthine pressure; the swelling of the mucous covering of the labyrinth windows, and especially the swelling of the drum membranes in their upper part, involving the chain of ossicles and forcing them inward. It has been maintained that in such cases the want of perception through bone is due to hyperemia of the labyrinth (Politzer). From Hinton's observations one would infer that this hyperemia of the labyrinth occurred quite frequently in connection with inflammatory affections of the tympanum; but Schwartze[2] states that, even with the most acute inflammation of the tympanum, a simultaneous hyperemia of the labyrinth is

[1] For a description of this instrument, see "Arch. of Med.," iii., p. 224.

[2] Herman Schwartze, Kleb's "Handb.d. path. Anat.," ii, p. 120.

met with only exceptionally. In the foregoing case, however, the cause of the diminished bone conduction was referred independently to intra-tympanic influences, and the effect of the bleeding seemed to favor this belief.

Chronic Catarrh of the Middle Ear; Labyrinth Affection?

Case II.—Thomas W., aged 45 years, came under observation at the Manhattan Eye and Ear Hospital, New York, April 25th, 1879, with the statement that fourteen months before he had been struck on the head with an "ice run," which fell upon him from some height. He was rendered unconscious by the blow, and remained in this condition for about two hours. On recovering consciousness, he complained of tinnitus aurium and deafness. Vertigo developed soon after the injury, and has continued (with remissions) ever since. Patient is suffering from chronic gastric catarrh, in consequence of which he has lost much in bodily weight and strength during the past year. He is now extremely nervous; he eats very little, and that little is often rejected by the stomach. On being questioned, he stated that he had been troubled with tinnitus aurium several years before, but that he had not taken much notice of it until after the injury, when he also discovered that he could not hear the tick of his watch. H. D., R. E., w.. not heard *ad concham*; conversation in an ordinary tone of voice is heard only at a few inches from the right ear. H. D., L. E., w. heard only *ad concham*. T. F., between the teeth, is heard better in the left ear; watch heard through bone on right and left side from mastoid process only. The watch is heard faintly from either of these parts, but slightly better on the left side. Patient had inserted quids of tobacco into each ear, "to stop the noise" in the latter. The tobacco having been syringed out, both drum membranes were found very much sunken and reddened; the former appearance was especially remarkable in the right ear, where the prominence of the *processus brevis mallei* was very pronounced. The reddening of the drum membranes was most likely due to the somewhat vigorous syringing. The light spots are diffused and indistinct on each membrane, and the membranes appear hazy; otherwise, no changes were observed. Pharynx red and swollen, and covered in parts with an offensive tough secretion.

After inflation through the catheter, which was unsatisfactory, exhaustion of air from the external meatus was employed by means of Siegle's otoscope, after which the hearing distance for the watch was as follows: R. E., $\frac{1}{2}''$; L. E., 1″; whisper, R. E., 5 feet; L. E., 11 feet. Throat sprayed with a solution of ammonium chloride, gm. 2 : 115, and patient directed to gargle with a two per-cent solution of tannic acid. Diet prescribed, consisting principally of milk. Faradic current, general and over the region of the stomach.

May 7th.—H. D., R. E., w. $2\frac{1}{2}''$; L. E., 4″; whisper, R. E., 13 feet; L. E., 20 feet. The tinnitus, which has been markedly less during the past two days, is about the same to-day as when the patient was seen for the first time. After inflation, H. D., R. E., w. 8″; L. E., 4″; watch placed on glabella heard only on left side; heard on the right side only when held on the right mastoid process, and then more faintly than in left ear, when held on glabella. Tinnitus very much less.

May 12th.—Still some vertigo, but tinnitus has not occurred in right ear since two days ago; slight tinnitus in left ear. H. D., R. E., w. 7″; L. E., w. 3″. After inflation, H. D., R. E., w. 9″; L. E., $5\frac{1}{2}''$. Watch heard through bone on either side, over processus mastoideus, and between the teeth; T. F., held between the teeth, heard only on left side.

May 18th.—H. D., R. E., w. 10″; L. E., w. 8″: after inflation, H. D., R. E., w. $12\frac{1}{2}''$; L. E., w. 9″; bone conduction same as on 12th inst. T. F., between the teeth, heard better in left ear.

May 25th.—There has been no tinnitus since the 14th inst. The vertigo, which has been very slight during the past ten days, has entirely disappeared. Patient remained under treatment until June 15th. When seen for the last time, the record was as follows: H. D., R. E., w. 15″; L. E., w. 11″. Perception through bone is good over mastoid process and between the teeth. T. F., between the teeth, is heard better in the left ear.

It is quiet evident from the history of this case that the patient had suffered from ear disease prior to the injury, at which time his attention was directed to the condition of his hearing. The aurist is frequently consulted for relief from tinnitus aurium by patients who have been subjects

of ear disease for many years, perhaps, but whose attention was first attracted to their ears by the development of tinnitus; and they are much surprised to find their hearing very imperfect, only being able, perhaps, to hear the watch when placed in contact with the ear. Upon close questioning, it was ascertained that the patient had suffered at times from dizziness some months prior to the injury. The vertigo, which was intermittent in character, could, it seemed to me, be referred to the gastric disorder, inasmuch as improvement in the condition of the latter was followed by marked diminution and final cessation of the vertigo; but, at the same time the patient first visited the hospital, fourteen months after the accident, I believe that the partial obliteration of the perception of sound through the cranial bones was essentially due to disease of the middle ear, which evidently antedated the injury and was quite independent of the latter. Although there was no suspicion of the presence of fluid in the tympanic cavity, paracentesis was done, but no fluid was found. I have, therefore, assumed the case to be one of chronic catarrh of the tympanum, with impaction of the plate of the stapes in the oval window. The obliteration of aerial conduction and diminished perception of the tuning-fork on the right side, when the first examination was made, would point to a labyrinth affection; but it is seen that after removal of the impacted tobacco from the external auditory canal and inflation, and more particularly *exhaustion* of air from the external meatus, by means of Siegle's otoscope, thereby occasioning an outward movement of the membrana tympani, the state of this was reversed; we then had, in fact, the signs of middle ear disease, as evidenced by examination with the tuning-fork and watch.

Chronic Adhesive Inflammation of the Middle Ear.

Case III.—Chas. S., aged 20 years, came under treatment February 28th, 1878. Patient had scarlet fever when ten years old. He does not remember to have had any ear

trouble until three years ago, when he used a "nasal douche," which was followed by pain and a discharge from the ear. His general condition is poor, being very thin and anemic. There are several scars on the neck from old strumous abscesses; tonsils are much enlarged. Both drum membranes are thickened, and appear to be in contact with the promontorium; they are red in their upper part; in the right ear several large sized blood vessels are seen coursing across the drum membrane to a point situated in its antero-inferior quadrant, probably the seat of the old perforation. The lower half of the membranes is of a yellowish gray color. H. D., R. E., w. *ad concham* faintly; L. E., w. not heard *ad concham*; T. F., held vibrating before the ear: R. E., 1″; L. E., heard only when almost in contact with the ear, and then very faintly. T. F. (b), between the teeth, is not heard at all; tone c., on the other hand, is heard only on right side; bone conduction for the watch is not present from any point on either side. Inflation can only be done through catheter, and then with difficulty; the hearing distance remains the same as before. A piece of each tonsil was sliced off. The throat was sprayed with a solution of kalium iodide. Ordered a generous dietary, into which milk and cream entered freely; dialysed iron internally.

March 6th.—Patient has been seen every day since the 28th ult., Siegle's otoscope being used each time. On the third occasion rarefaction of the air in the external auditory canal produced a movement outward of the left drum membrane, which was not noticed before. H. D., R. E., w. 1″; L. E., w. *ad concham*; voice (ordinary conversational tone, bass), with each ear, five feet. Inflation can be done by Politzer's method to-day, after which the watch is heard as follows: R. E., 3″; L. E., *ad concham*, very much better than before; bone conduction for watch present over right mastoid process.

March 14th.—The tinnitus, which on the day following paracentesis of the drum membrane had disappeared, is again noticed to-day in left ear. Bone conduction for the watch is not present from any point on either side, although after inflation the hearing distance is better than it was three days ago.

March 21st.—H. D., R. E., w. 5″; after inflation, 6½″; L. E., w. 1½″; after inflation 3″; voice, about 12 feet in each ear; the watch is heard over either mastoid process, but

better over right mastoid. T. F., between the teeth, heard better on the left side; when placed on the vertex, the T. F. is heard only in left ear.

March 28th.—H. D., R. E., w. 5″; L. E., 4″; after inflation the watch is heard in both ears, 6″. T. F., between the teeth, is heard equally well on either side.

April 3d.—No tinnitus since a week ago. Siegle's otoscope, which has been used eight times since the beginning of treatment, shows, when the air in the external auditory canal is exhausted, that the *manubrium mallei* makes a liberal movement outward.

April 8th.—H. D., R. E., w. 8″; after inflation it is present from either mastoid process.

April 12th.—H. D., R. E., w. 8½″; L. E., w. 8″; watch heard over right mastoid only. After inflation it is heard from either mastoid, or at 9″ in each ear.

May 2nd.—Upon my advice, patient passed from treatment until the following fall. The hearing distance for the watch was 11″ in both ears; the voice was heard at fifteen feet. The injection of ether vapor into the tympanum seemed to have had a good effect.

The following case presents many features in common with the foregoing:

Case IV.—Mrs. G., aged thirty years, a delicate little German lady, consulted me July 10th, 1880, on account of great difficulty of hearing. She can trace her trouble to twelve years ago. She has never had a discharge from either ear. She understands conversation better at times, the state of the weather, however, having apparently little to do with improvement or deterioration. The prominence of the *processus brevis mallei* is pronounced in both ears; the light spot on the drum membrane is diffused; on the left it is interrupted. Both drum membranes have an opaque look. With the otoscope cannot make any perceptible outward movement of either drum membrane. There is tinnitus aurium. The watch is not heard *ad concham* in either ear. Politzer's acumeter, through air, 2″ in R. E.; 4″ in L. E.; placed on the glabella, the acumeter is heard better on the left side. T. F., between the teeth, is heard better in the R. E. Inflation is easy, but produces no appreciable improvement.

July 13th.—Aerial conduction for T. F., 1″ for either ear, but the tone is heard better in the right ear at this dis-

tance; T. F., between the teeth, heard better on the right side; after inflation it is heard better on the left side.

July 15th.—H. D., R. E., w. *ad concham*, Politzer's acumeter, $2\frac{1}{2}''$; L. E., w. not heard *ad concham*; acumeter, 4″. T. F., between the teeth, is heard better on the left side, even when the right meatus is closed; the watch is not heard through bone from either mastoid. H. D., R. E., T. F., 1″; L. E., $2\frac{1}{2}''$; after inflation, H. D., R. E., w. $\frac{1}{4}''$; L. E., w. *ad concham*. After exhausting air in external auditory canal with Siegle's otoscope, watch is heard at $\frac{1}{2}''$ from either ear, but louder in left ear; T. F., between the teeth, is heard better in the left ear; acumeter, R. E., 3″; L. E., 12″.

July 17th.—Watch is heard *ad concham* in either ear, but better in the left; the bone conduction for the watch fails; H. D., R. E., acumeter, $2\frac{1}{2}''$; L. E.. 4″; T. F., between the teeth, heard better on the left side; whisper, R. E., 8″; L. E., 3″; ordinary conversation is heard at fifteen feet. T. F., by aerial conduction, R. E., not heard; L. E., 2″. After inflation the T. F. is heard, R. E., $\frac{1}{2}''$; L. E., 3″; T. F., between the teeth, better in right ear. A few days subsequently she was taken ill, as her family physician informed me, with an acute uterine affection. When sufficiently recovered, she was removed to the sea-side, and I have not seen her since.

In cases III and IV, somewhat similar causes operated to produce the same effect. The result produced by Politzerization, and the use of the otoscope, would furnish an explanation for the belief that the synechiæ binding down the parts of the conducting apparatus were, by the means adopted in the treatment, loosened or stretched—especially the synechiæ of the stapes which were believed to exist—thereby liberating the labyrinth, etc. In this way, it is thought, the improvement in the hearing power by air and by bone was brought about.

In case IV, some form of catarrhal inflammation of the tympanum existed twelve or more years before the patient consulted me. It is immaterial whether this inflammation was mucous, serous or purulent in character, inasmuch as adhesive inflammation may follow any one of these forms.

In addition to the middle-ear disease, Mrs. G.'s case presents another element for consideration. When a high degree of imperfect hearing has existed for a considerable period of time, the terminal apparatus of the auditory nerve may become atrophied from absence of special excitation, or disturbance of nutrition of the ultimate nerve-apparatus take place from continuous intra-labyrinthine pressure, dependent upon tympanic disease; and it is believed that this latter condition obtained in her case.

Although recapitulative, in order that an explanation for the phenomenon of intermittent bone conduction may be understood, it will not be out of place here to formulate the points in differential diagnosis between an affection of the middle ear and one of the labyrinth, as evidenced by examination with the tuning-fork.

1. If a vibrating tuning-fork, c, be placed between the teeth, the hearing power being normal on one side and diminished on the other, and its tone be intensified in the ear of which the hearing power is diminished, the cause has its seat in the external or middle ear, and the labyrinth is unaffected.

2. If the hearing power be impaired in both ears, and the sound of the tuning-fork be heard better in the worse ear, and *intensified on closure of the ear of which the hearing power is most impaired*, the cause is still located in the middle ear.

3. If under either of the above-mentioned conditions the vibrations of the tuning-fork be not heard better in that ear of which the hearing power is most impaired, even if its meatus be closed with the finger, *and middle ear disease as a cause can be excluded*,-there is an affection of the central apparatus of hearing. If the tone of the tuning-fork be still intensified by *closure of the ear the hearing power of which is less impaired, there is disease of the central apparatus on one side only.*

Should the sound of the tuning-fork not be intensified

by closure of either ear, then the disease is on both sides, and has its seat in the labyrinth or in the brain.

In the first and second propositions the increased resonance results, as has been explained above, from the reflections of the vibrations from the cranial bones upon the nerve.

In the third proposition, the reflection or condensation of the vibrations of the tuning-fork upon the nerve when the meatus is closed does not intensify their perception, because the function of the auditory nerve itself, and not that of the conducting apparatus, is impaired. The foregoing points are, I believe, accepted by the majority of otologists; but it appears to be the opinion of a recent writer,[1] that "if the tuning-fork on the vertex be heard in the affected ear, we can not place the lesion in the labyrinth." This opinion, although emanating from an astute observer, is, it seems to me, incorrect; at least we have in the eye positive evidence that the optic nerve may be considerably affected by acute or chronic disease, and useful vision still remain.

The peculiarity that in some cases of middle-ear disease the watch is not heard by bone conduction, and in other cases examination with the tuning-fork gives the signs of labyrinth disease—*i. e.*, the tuning-fork being heard by bone conduction better in the ear which is normal as to hearing power, therefore diminished instead of increased in the ear of which the hearing capacity is impaired—can not, it appears to me, be explained by assuming an interference with the chain of ossicles. I incline to the belief, based upon experiments, that this phenomenon is due to increased intra-labyrinthine pressure, brought about in those cases of middle-ear disease in which there is an accumulation of fluid in the tympanum, or the membrana tympani is much depressed; in the former instance by the fluid in the cavity acting upon the oval or round window, or both, and in the

[1] C. H. Burnett, M. D., "American Jour. of Otology," iii, p. 200.

latter instance by the plate of the stapes being forced against the membrane in the oval window. In both cases the terminations of the acoustic nerve suffer a mechanical irritation, which gives rise on the one hand to subjective noises in the ear, and on the other hand annuls the perception of certain tones. Extreme pressure upon these parts may so interfere with intra-labyrinthine vibrations as to completely obliterate bone conduction, for the tuning-fork. That pressure exerted from without upon the foramen rotundum, and upon the movable plate of the stapes, results in increased pressure upon the fluids in the labyrinth, has been demonstrated by Prof. Politzer.[1] In his experiment with a manometric tube, inserted into the superior semi-circular canal, he showed that the height of the fluid contained in the tube was increased by the pressure exerted upon the parts just named.

The four cases given in this paper have been selected from the records of a large number of a similar class, in all of which the intermittence of the sound conduction through the cranial bones was brought about by the presence of diseased changes in the middle ear; and, if it can be established as a fact that this part and not the labyrinth is the actual seat of the cause of intermittence, certainly a great advantage will be gained; because, our knowledge of the pathology of the labyrinth being so meager, we should, by directing our efforts in treatment toward the diseases of the middle ear—which are well understood, and in which timely and appropriate therapeutic measures often yield encouraging results—be enabled to give a more favorable prognosis.

[1] Lehrbuch der Ohrenheilkunde, Bd, i, p 79.

THE CAUSE OF DEAFNESS IN CHILDREN AFTER MENINGITIS.

By Charles A. Todd, M. D., *Prof. Diseases of Ear and Throat, Etc., Missouri Medical College, St. Louis.*

EXAMINATION of the reports of institutions for the care of the deaf and dumb demonstrates the fact that a large number of these unfortunates are the victims of meningeal affections, cerebro-spinal meningitis figuring conspicuously in the record. In the Pennsylvania Institution at Philadelphia, during a period of three years, two-thirds of the entire number of admissions (137 cases) had lost their hearing from fever and other causes not congenital (Burnett). At the Missouri Institution, Fulton, under the head of Causes of Deafness, the biennial report for 1879 and 1880, among other data gives the following: Brain fever, 27 cases; spasms, 4; unknown, 32; cerebro-spinal meningitis, 68: these among a total of 291. Every physician of experience will take for granted that the "spasms and brain fever" cases include a large number of meningeal affections. It is well known that acute otitis media in young children, by reason of anatomical conditions, may induce meningitis that shall end fatally, convulsions being the most striking symptom; from other anatomical conditions, those that recover are liable to suffer from deafness more or less complete; hence, very probably, the diagnosis of "brain fever and spasms." As for the 32 "unknown," it will not be a violent conjecture, considering the circumstances that attend admission to a state institution, to infer that no small part of this class may be referred to meningeal disease, that disorder having been overlooked by those in charge at the time of the sickness. It will be observed that a typical meningeal affection, the "spotted fever," or cerebro-spinal meningitis, is credited with the greatest number of cases; in these the cause was too evident to be ignored. The epidemics of cerebro-spinal meningitis that have scourged the west re-

peatedly during the past few years, have largely added to the list; numbers have come under my own observation both at the college clinic and in private practice; total and hopeless deafness is the rule.

We have then, in the course of a meningitis in children, no matter what its nature or origin, to apprehend the worst consequences as regards the integrity of audition. What is the character of the lesion that so threateningly attends the progress of inflammation of the membranes of the brain? Without staying to discuss the various probabilities that have been suggested, and more or less clearly demonstrated in individual cases, let us examine the apparatus of hearing and its connections with the dura mater, in hope to arrive at certain and definite conclusions. We shall find that the labyrinth of young children is specially open to extension into it of meningeal inflammation. At this period of life the growing petrous portion of the temporal bone is rich in vessels and spongy osseous tissue; indeed, there exists for several years quite a cavity under the superior semicircular canal, which receives a vessel of notable size from the dura mater, a branch of the meningeal artery. In the adult this cavity diminishes to a mere slit, that still lodges, however, a small process of dura mater; it is to be found just over and back of the internal auditory meatus. Evidently a meningitis may extend along this vessel into the spongy bone about the labyrinth and cause its destruction.

But in children a less obvious disease may induce this fatal complication. In the adult temporal bone, at the angle of junction between the squamous and petrous portions, an obliterated suture is usually observable; this indicates the original line of separation of the two parts: the temporal of an infant during maceration falls readily apart into these two portions. This is an anatomical fact that is not as well kept in mind as it deserves, for an acute inflammation of the tympanum can easily enough pass from that space into the cranial cavity, following directly the soft

structures, and thereby invade, as above explained, the adjacent labyrinth, with or without an attendant meningitis. Hence, the diagnosis of "spasms" and "brain fever" and "risings in the head," as occasional causes of total deafness. The caution is too plain to require argument, that in young children symptoms of intra-cranial disease not clearly referable to other causes should at once lead to examination of the ears.

Prof. Lucæ, of Berlin (Virchow's Archives, vol. 88, 1882, p. 558, et seq.), details the results of two post-mortem examinations of the labyrinths of children, one aged $3\frac{1}{2}$ years and dead after tubercular meningitis, the other 7 months old and dead of cholera infantum. In the first a rather thick vascular process passed from the dura into the cavity under the superior semicircular canal, there giving off a number of branches to the bone, the whole system sharing in the meningeal congestion. The bone itself was infiltrated with blood and pus corpuscles (osteo-myelitis). The membranous canals and vestibule were involved in the same process, being of a reddish yellow color and softened, and under the microscope exhibiting a corresponding condition. The cochlea also contained blood extravasations, the vessels of the lamina spiralis being markedly congested. The acoustic nerves were normal, also the auditory arteries. In the course of its sickness the child had for three days tinnitus, which was followed by total deafness.

In the cholera infantum case, there was acute otitis media, *without* perforation of the membrana tympani, on both sides. Brain and meninges normal. The meningeal artery passing under the superior semicircular canal was almost as large as the auditory artery itself; the accompanying vein was distended with blood. The soft tissues occupying the petro-squamosal suture, and connecting the dura with the lining membrane of the tympanum, were greatly congested; this indicated the true origin of the labyrinthine disease. The semicircular canal contained blood extravasations; the membranous canals were much congested. The vessels of the cochlea were also congested.

CASES FROM PRACTICE.

SURGICAL DEPARTMENT ST. LOUIS HOSPITAL—EXCISION OF THE KNEE JOINT.

[Service of Dr. N. B. Carson—Reported by Paul Y. Tupper, M. D.]

Louis W. S., American, aged 27, single, restaurant-keeper. Entered hospital July 18th.

History.—Family history generally good. Mother and maternal grandmother suffer from asthmatic attacks. His health never very robust. Has had a slight cough since an attack of rubeola nine years ago. Ten years since he suffered from acute articular rheumatism, involving both knees and other joints of the body. From this he apparently recovered fully. About eight and a half years ago a slight enlargement of the right knee first appeared. For this he knew no cause. The enlargement gradually and continually increased, but was accompanied with little or no pain. The leg became flexed at an obtuse angle with the thigh, but was useful for locomotion. In an orthopedic institution he wore a brace for twelve months, during which time the enlargement seemingly decreased in size. On laying aside the brace, however, the joint resumed its former condition.

About six months before applying here for treatment the knee became painful—the pain soon becoming so acute as to prevent walking without the assistance of a crutch.

Condition on Entering.—Leg somewhat flexed. Tuberosities of femur and head of tibia enlarged. Some synovitis. Joint painful on manipulation. Ordered quiniæ sulphatis, grains v, three times daily; morphiæ sulphatis, $\frac{1}{8}$ grain, whenever suffering pain.

Operation.—Aug. 8th. Ether. A transverse incision was made by Dr. Carson across the anterior aspect of the joint, extending from the lower and posterior border of one tuberosity to that of the other. The ligamentum patellæ was severed,

and the patella dissected from the superior flap. The entire under surface of this bone was soft and spongy—a large portion of it having been absorbed. The internal and external lateral ligaments were divided, the anchylosis forcibly broken up, and the leg flexed upon the thigh, exposing the articular ends of the bones. The condition of the joint was worse than had been expected. The internal ligamentous structure of the joint was destroyed. There was complete degeneration of the synovial membrane, and destruction of the articular surface of both the femur and tibia and of the head of the fibula. After dissecting back the tissues, the diseased portion of the femur, which extended $1\frac{3}{4}$ inches toward the shaft, was sawn off, leaving a smooth surface of healthy bone. About $\frac{1}{4}$ inch of the articular surface of the tibia was removed in like manner. In approximating the two sawn surfaces, the adjustment seemed perfect, and the leg was in good line. No tourniquet or Esmarch's bandage was used. The amount of blood lost was not great. Wound was thoroughly washed out with a one to eight solution of carbolic acid, the flaps united with about eight silk sutures, and the joint fully enveloped in successive layers of gauze wrung out in carbolized water.

The splint used consisted of two parallel iron rods, $\frac{1}{2}$ inch in width, flattened on their inner surfaces, which extended along the inner and outer sides of the thigh and leg, and were united by a cross piece beneath the foot. The splint was bracketed at the knee to admit of the application of the dressings to the wound. In applying the splint, the leg and thigh were first enveloped in cotton wadding and a dry roller bandage. A wooden foot-piece was applied to the plantar surface of the foot; the splint carefully adjusted so as to maintain the leg in proper line, and the whole secured in line by plaster of Paris bandages, applied around the splint and limb from the toes to the upper part of the thigh—excepting the bracketed space at the knee. In bed the limb was kept slightly elevated by a double cord, which was attached to the splint at the foot and knee and passed through a ring above.

Progress and After-Treatment.—July 8th.—Morph. sulph., gr. $\frac{1}{4}$, every 2 hours; quiniæ sulph., grs. x, every 3 hours.

July 9th.—Temperature, $97\frac{4}{5}$° F. Pulse, 112. Continue treatment.

July 10th.—Temperature, 99°. Pulse, 104. Tongue dry. Some nausea. Ordered suppository, containing grs. x quiniæ sulph., morning and evening.

July 11th.—Temperature, 100⅘°. Pulse, 100. Tongue tends to dryness. Sleep disturbed by dreams. Dressed under carbolic spray. Looking well. Discharges sweet.

July 12th.—Temperature, 101⅘°. Pulse, 116. Tongue dry in center. Nausea, but no vomiting. Ordered quinia suppository three times daily.

July 13th.—Temperature, 99⅖°. Pulse 88. Rested well. Improved. Tongue moist.

July 14th.—Temperature, 100°. Pulse, 96. Dressed under spray. Looks well. Removed sutures. Nearly one-half of wound united by first intention.

July 15th.—Temperature, 99⅖°. Pulse, 88.

July 16th.—Temperature, 99⅖°. Pulse, 96.

July 17th.—Temperature, 99°. Pulse, 92.

July 18th.—Temperature and pulse normal.

July 19th.—Temperature and pulse normal.

July 20th.—Temperature and pulse normal. Ordered Seidlitz powder, one quinia suppository morning and night, syrup hypophosphites, ʒj, three times daily.

July 21.—Temperature, 99⅕°. Pulse, 108. Wound looking and doing well.

July 22.—Temperature and pulse normal.

Since the above time the patient's temperature and pulse have remained normal; his general appearance is better than before the operation; and his appetite and sleep have been good. The wound was dressed antiseptically for about three weeks; afterwards with simple dressing every fourth or fifth day. Seven weeks after the operation the splint was removed. Leg was found to be in good line, and the bony union at the seat of operation firm. During the whole time no pain has been felt at the knee, and the discharges from the wound have remained sweet.

Oct. 27th.—The patient walks about the wards on crutches, and feels no discomfort whatever at the point of excision or elsewhere.

A RARE CASE—NECESSITATING THE REMOVAL OF A GANGRENOUS TESTICLE AND THE LIGATION OF AN OLD HERNIAL SAC.

Service of Dr. E. H. Gregory—Reported by Paul Y. Tupper, M. D.

Thomas C., born in Ireland, aged 60, married, laborer. Entered hospital Sept. 30th.

History.—General health has been good. In 1863 was ruptured by heavy lifting. The rupture was at first very small, but gradually increased in size until it filled scrotum. Trusses seemed to prove inefficient in keeping hernia reduced. Frequently had great difficulty and pain in returning intestine to abdominal cavity. Right testicle has remained somewhat larger than the other ever since the receipt of a kick in the scrotum many years ago. At the time of the injury the testis was greatly enlarged and inflamed.

About two weeks before entering hospital, testicle again became enlarged and painful, but this time without any apparent cause. The hernia was reduced the day before entering.

Condition on Entering.—The right testis was greatly enlarged, globular and painful. The scrotum was tightly drawn over the rounded mass. Physical examination gave no clue to the true state of affairs within. Hernia reduced.

Operation.—Sept. 30th, Ether. An exploratory incision was made by Dr. Gregory through the scrotum into the substance of the testicle, disclosing gangrene of the entire organ. The odor was most offensive. Incision was enlarged and the testis enucleated—the cord being so rotten as to be easily detached without the use of the knife. The old hernial sac was discovered in place, and greatly thickened, but containing no loop of intestine—this having been recently reduced. The finger could be readily introduced through the sac and inguinal canal into the abdominal cavity. The parts in the scrotum were so changed by the morbid processes as to be almost unrecognizable; but what was supposed to be a portion of the omentum was found unreduced, and lying *posterior to and almost entirely surrounding the destroyed testicle,* the whole being tightly bound down by inflammatory adhesions. This strange condition could only have been produced by a rupture of the

hernial sac posteriorly, allowing an escape of the omentum into the scrotal cavity. This supposition is supported by the fact that the finger could be passed up as far as the abdomen *between* the sac and omentum.

A single ligature was cast around the cord and the accompanying vessels. The hernial sac was occluded high up by transfixing and ligating on either side. Parts washed out with a 1 to 8 solution of carbolic acid. Dressed with lint steeped in weak carbolized solution.

Progress and Treatment.—Oct. 1. Temperature, F. 100$\frac{1}{5}$°. Pulse, 74. Slept well, requiring only morph. sulph., gr. $\frac{1}{8}$,

Oct. 2d.—Temperature, 99°. Pulse, 78. Cheerful.

Oct. 3d.—Temperature, 98$\frac{2}{5}$°. Pulse, 76. Rather restless last night. Pain and some tumefaction at point of ligature of hernial sac. Ordered morph. sulph., gr. $\frac{1}{4}$, every half hour until relief.

Oct. 4th.—Temperature, 98$\frac{2}{5}$°. Pulse, 64. Pain still. Continue morphine, and give quiniæ sulphatis, grs. x, three times daily.

Oct. 5th.—Temperature, F. 98$\frac{4}{5}$°. Pulse, 66. Rested better. Considerable swelling and some pain over hernial sac. Ordered quinia at night only.

Oct. 6th.—Temperature, F. 98$\frac{2}{5}$°. Pulse, 64. Feels well. Parts granulating nicely.

Oct. 7th.—Temperature and pulse normal. Feels well. Appetite not so good. Discontinue morphine, and give grs. xv chloral hydrate at bedtime.

Since the above time the patient's condition has been excellent, having no rise of temperature and suffering no pain.

Oct. 27th.—Patient was discharged this day in good health, suffering no pain whatever at the seat of operation, and the scrotal cavity almost entirely filled up with healthy granulations.

Vaccinating a Train Load of Passengers.—The New York express train, on the Erie railroad, passing eastward, was held at Elmira, November 9th, till physicians could vaccinate all the passengers not already safe from contact with smallpox, as a passenger afflicted with symptoms of that disease was taken from the train at Hornellsville.—*Scien. Amer.*, Nov. 18,'82.

EDITORIAL.

THE BACTERIA OF SYPHILIS.

Having called attention already in several instances to experiments upon animals, with reference to the elucidation of some interesting points in regard to the nature of the syphilitic virus, we will now note some experiments upon swine that have been performed by MM. Martineau and Hamonic, and were reported to the Académie des Sciences and the Académie de Médécine, at the meetings early in September, the paper appearing in *L'Union Médicale* of September 7th.

They attribute the want of success in the experiments of other investigators, as well as their own early attempts, to defective methods. For several months, they say, they sought the bacteria, either in the blood or in the syphilitic infiltration, which constitutes the infecting chancre, the papular syphilides, etc. After numerous failures they adopted another method, which, after experimentation upon animals, warrants them in asserting the existence of syphilitic bacteria.

April 29th, '82. At noon they excised an indurated chancre, and placed it in a flask containing a certain quantity of culture bouillon, prepared according to the directions given by M. Pasteur for the study of microbia; at three o'clock the culture liquid had lost its transparence; at half past six o'clock a grayish deposit had formed at the bottom of the flask; and April 30th, at 10 A. M., they determined by the microscope the presence of numerous bacteria. To determine the reality of this syphilitic bacteria, they injected into the sub-cutaneous cellular tissue of a young hog a certain quantity of this culture liquid containing bacteria. The day after this injection they

determined the presence of analogous bacteria in the blood of the animal. About a month after the inoculation, cutaneous syphilitic manifestations (syphilides papulo-squameuses) developed upon the abdomen, and at the same time the hair fell out.

To confirm this experiment, they made an inoculation upon another young hog with a needle charged with the serosity collected from an infecting chancre.

Four days after this inoculation, a microscopic examination of the blood determined the presence of bacteria analogous to those found in the first experiment. Fourteen days afterwards, papular syphilides appeared upon the abdomen. At first isolated, they became generalized, lasting for several days, then disappeared completely two months after inoculation. Moreover, after a few weeks, microscopic examination of the blood demonstrated the absence of bacteria.

Other experiments indicate that while syphilis is inoculable from man to swine, it is not inoculable from swine to man nor to other animals.

The experimenters promise to continue their investigations, and make known their results as soon as they are determined.

CURABILITY OF EPITHELIAL CANCER.

Dr. Wm. A. Collins reports (*Cincinnati Lancet and Clinic*) an experience in the treatment of epithelial cancer which, if confirmed by the observation of others, is a most valuable contribution to our therapeutic resources. Having under treatment a patient suffering from a cancerous affection of the face and neck, which precluded the use of knife or caustic, it occurred to him to try the effect of ergot to diminish the vascularity and capillary circulation, and thus limit the excessive cell-growth which forms the characteristic feature of these conditions.

The trouble had commenced in a hardened tumor of the skin, just below the point of the ear, which grew slowly and without pain at first. About two years before coming to Dr. Collins it had attained the size of a walnut; the surface ulcerated and pain began. The ulceration extended in depth and extent until it involved the parotid gland and the ear, and extended from the auditory meatus downward and forward for about four or five inches. This ulcerated surface, of an irregular circular form, was surrounded by an elevated, indurated and nodulated margin or roll about an inch in diameter, thus making an extent of surface about six inches in diameter that was involved in the morbid process. The general depth of the ulceration was about an inch below the marginal surface, and in the center it was deeper and the pulsation of the carotid artery was plainly visible. The floor was covered with indurated, nodulated bodies, and the discharge was of a sanious nature, the elevated margin and floor being quite hard. The neighboring lymphatic ganglia were indurated and tender. He presented all the symptoms of advanced cancerous cachexia. Profuse hemorrhages had frequently taken place, and in the opinion of all the physicians who saw him death seemed imminent.

Fresh ergot, *freshly* ground to an *impalpable* powder was applied three times daily to the whole surface of the ulcer with a large, soft hair pencil, the ulcer being washed off carefully once every day. The powder was applied dry. After each application the ulcer was covered with a light muslin rag, wet with the following lotion:

℞.	Acid. carbolici, - . - -	ʒi.
	Acid. sulphurosi, - - - -	ʒj.
	Glycerinæ, - - - - -	ʒiv.
	Aquæ, - - - - -	ʒijss.

M. S. Lotion.

Tonics of quinine, iron, cod-liver oil, etc., were also prescribed. In a short time the appearance of the ulcerated sur-

face changed, and in twelve weeks the whole ulcer had healed up, and continued so four years afterwards at the time of the report.

In a case of mammary cancer, where the greater part of the gland had been destroyed by the ulcerative process, and its site was occupied by an open ulcerating surface some five inches in diameter and an inch in depth, with a hard, elevated, nodulated margin, and with the axillary glands involved, the same treatment resulted in complete though less rapid cicatrization and cure.

Dr. Collins cites several other cases where similar results were obtained. Certainly, in such a disease as this, where so little has been accomplished by methods of treatment heretofore practiced, any mode of treatment that can be so readily applied as this, should be thoroughly tested without delay.

Certainly, the end to be sought for is in some way to diminish the nutrition, and limit the rapid development of cells, which seem to constitute the essential element of the cancerous growths; and the power to arrest hemorrhages by a specific action upon the vaso-motor nervous system, thus controlling the circulation, especially in the capillary vessels, would make this a remedy from which we may hope to secure further results like those which Dr. Collins has reported.

Life on Wheels was the title of a paper read by Dr. T. P. Wilson, of Ann Arbor, Mich., before the American Public Health Association at their recent meeting. He estimated that 1,000,000 to 1,500,000 people are on the cars in this country daily. Railroad travel is not necessarily perilous and uncomfortable. The first want is fresh air. Fifty or sixty persons in a car exhaust the oxygen in a car in a few minutes. Sleeping cars are a little worse, and the lower berths are the worst of all. The heating arrangements are defective, and the drinking water from tanks in cars is bad.—*Med. Times*, Oct. 28th, 1882.

BOOK REVIEWS AND NOTICES.

Practical Medical Anatomy. A guide to the physician in the study of the relations of the viscera to each other in health and disease, and in the diagnosis of the medical and surgical conditions of the anatomical structures of the head and trunk. By Ambrose L. Ranney, A. M., M. D., etc. *New York: William Wood & Company.* 8vo., pp. 339; cloth (Wood's Library).

This is an attempt, which the author has carried out with a good degree of success, to make the study of anatomy more practical and serviceable in the every-day work of the practitioner, by calling his attention to the many circumstances in which accurate anatomical knowledge facilitates the treatment of disease, as well as aids to completeness and fullness of diagnosis.

Commencing with the head, he calls attention to the points of special interest in relation to their bones, to the value of the human face as a guide in diagnosis, to the blood-vessels of the head and to the points of special interest pertaining to the special regions of the head; and so taking up the trunk he endeavors to show that in reality "anatomy is the foundation of medical knowledge." We have always felt that lecturers on anatomy deal too much with the dead subject which they are demonstrating, and too often fail to vitalize it by showing their classes the true connection between the anatomical details and the facts of clinical observation. Dr. Ranney's book will be a help to lecturers and to students as well.

Labor Among Primitive Peoples. By Geo. J. Engelmann, A. M., M. D., etc. Fifty-six Illustrations. *St. Louis: J. H. Chambers & Co.* 1882. 8vo., pp. 203; cloth, $1.00.

As indicated upon the title-page, this volume shows "the development of the obstetric science of to-day from the natural and instinctive customs of all races, civilized and savage, past and present." It consists of a series of papers that are the outgrowth of investigations to which the author was prompted by the study of a peculiar specimen of pottery, a Peruvian burial urn.

These papers, five in number, treat of "Posture in Labor," "The Third Stage of Labor," "Pregnancy, Parturition and Child-bed," "Massage and Expression," and "Characteristic Labor Scenes among the Yellow, Black and Red Races," the latter of which we had the pleasure of giving to our readers in the pages of the Courier.

Those who read this paper we are sure will be anxious to procure the book, in order that they may read the rest. To others we would say, that in the preparation of this volume the author has had special facilities for collecting information, which he has utilized to the full extent, and that both in matter and manner the work is an exceedingly interesting one. Accurate knowledge of the customs of the peoples who are nearest to a state of nature, in regard to those matters that concern the perpetuation of the race, cannot but be helpful in guiding to a correct practice the nations that lay claim to a great superiority over the others in very many particulars.

Opium-Smoking in America and China. A study of its prevalence and effects, immediate and remote, on the individual and the nation. By H. H. Kane, M. D., etc. *New York: G. P. Purnam's Sons.* 1882. 16mo., pp. 156; cloth, $1.00.

This is a review, by one who has taken special pains to investigate the subject, of the present status of the habit of opium smoking in our country.

One statement made is, to say the least, very extraordinary. After detailing in full and with graphic minuteness the injurious effects of the habit and its great power over the victim, the author states that he completely cured one of these smokers in the short space of ten days.

Suppression of Urine. Clinical descriptions and analysis of symptoms. By E. P. Fowler, M. D. Ninety-three cases with illustrations, tables and diagrams. *New York: William Wood & Company.* 1881. 8vo., pp. 86; cloth.

This is an exceedingly interesting and valuable monograph presented by Dr. Fowler to the New York Medico-Chirurgical Society. It consists of a detailed account of a case that had occurred in his practice of complete anuria lasting for ten days, the cause of which was the complete cystic degeneration of the left kidney, and the obstruction of the right renal artery by pressure from the cystic tumor.

In addition to this and appropriate remarks upon notable features of the case, Dr. Fowler has, with immense labor and pains, searched the literature of our profession for a hundred years back, and has gathered together the data with regard to all the accurately reported cases during that period. These, numbering ninety-three, he has condensed and tabulated, and then analyzed with regard to a number of prominent points, giving the results in tabular form.

It is a volume which, though small in size, involved a vast deal of labor in its preparation, and for which the author deserves great credit.

The Medical Record Visiting List for 1883. *New York: William Wood and Company.*

This is sure to be a very popular visiting list, as it is convenient in arrangement, elegant in appearance, and contains all that is essential in the way of tables and notes for reference. The size has been reduced by omitting a number of pages of unnecessary printed matter. It is a serviceable and beautiful book for the purpose.

Speech and its Defects. Considered Physiologically, Pathologically, Historically and Remedially. By Samuel O. L. Potter, M. A., M.D., etc. Lea Prize Thesis of Jefferson Medical College. Published by permission of the Faculty. *Philadelphia: P. Blakiston, Son & Co.* 1882. 16mo,, square, pp. 117; cloth, $1.00.

This is a thoroughly well studied and carefully prepared thesis, in which the author considers the causes, character and treatment of the defect of speech which is commonly known as stuttering or stammering. The writer having suffered in that way, has brought to a consideration of the subject a personal interest, which enables him to appreciate thoroughly the sufferings of others so affected. We are disposed to think him unduly severe upon fathers, as a class, when he charges upon them the responsibility for the notable disparity in numbers between the two sexes, asserting that undue severity of treatment is the cause of this disparity, as boys are more than girls under the direction and influence of their fathers.

We think there can be no question that the general principles of treatment suggested by Dr. Potter are the only ones that afford any prospect of permanent relief of this trouble.

Transactions of the Medical and Chirurgical Faculty of the State of Maryland. 8vo., pp. 248; paper.

We notice that this association have a library valued at $7,500, which is continually increasing, books to the value of $1,000 having been added during the past year. They are also taking active measures toward securing a fire-proof building in which to deposit their library, two members of the faculty offering to give $1,000 each toward such a lot and building as may be necessary, provided that three others will contribute similar sums.

The president's address, after briefly referring to some matters of interest specially to the society, as the affairs of the library, etc., discusses at considerable length the observations made during the year upon the "germ theory," giving a résumé of the investigations of Pasteur, Koch and others.

To the report of the Section on Surgery, Dr. L. McLean Teffany contributes two papers, one discussing the treatment of cancer of the rectum. He advocates complete removal of the growth where practicable; where this cannot be done, palliation by the use of injections, iodoform suppositories, linear rectotomy, colotomy. The second paper is the report of a hip-joint amputation for osteo-sarcoma of the femur. Dr. G. H. Boyland has a study on fractures of the inferior extremity of the radius.

The report of the section on Practice of Medicine was prepared by the chairman, Dr. T. B. Evans, and consists of a paper reviewing the subject of contagions in the light of modern investigations. The section on Obstetrics and Gynecology reported that an organization was effected in May, and that monthly meetings had been held, except during the hot months of the summer, and that the section promised to be the basis of a thriving obstetrical society. The report consisted of a number of cases of interest, together with discussions upon them, and other topics which had been presented at their meetings during the year.

Several papers of local interest and value are contained in the report of the section on Sanitary Science.

Dr. R. Winslow, of the section on Anatomy, Physiology and Pathology, reported some anomalies of the osseous and ligamentous systems, as found in the dissecting room.

Associated Physiological and Pathological Mentality in the Insane, is the title of a paper by J. S. Conrad, of the section on Psychology.

Dr. J. J. Chisholm, of the section on Ophthalmology, has an interesting, well-prepared, conservative paper, addressed to the general practitioner, and containing a number of judicious, practical suggestions. There are also papers by H. N. Martin, of Johns Hopkins University, on "The Influence upon the Pulse-Rate of Variations of Arterial Pressure, of Venous Pressure and of Temperature;" by W. H. Howell and F. Donaldson, "Some Observations upon the Form of the Pulse-Wave and the Mean Arterial Pressure in a dog with Patent Ductus Arteriosus;" by Henry Sewell and F. Donaldson, "The Influence of Variation of Venous and of Arterial Pressure upon the Cardio-Inhibitory Action of the Pneumo-Gastric Nerves;" and by H. H. Donaldson and M. Warfield, "Influence of Digitaline on the Work done by the Heart of the 'Slider' Terrapin (Pseudemys Rugosa)." There is also a volunteer paper by J. N. Mackenzie, on "Diphtheritic Ulceration of the Air Passages, and its Relation to Pulmonary Phthisis."

Walsh's Physician's Handy Ledger—600 patients, $3.50; 1,200 patients, $6.00. Walsh's Physician's Combined Call Book and Tablet—$1.50. Published by *Ralph Walsh, M. D., Washington, D. C.* For sale by Jas. H. Chambers & Co., northwest corner Locust and Third Street, St. Louis, Mo.

Having used Dr. Walsh's Call Book in connection with his Handy Ledger for several years now, we can cheerfully recommend them to our friends as being convenient and satisfactory. They render the keeping of the physician's accounts a comparatively simple matter, and thus enable him to make his collections more efficiently. The ledger can be used in connection with any of the call books, but we have been well pleased with this one, as we have found it to contain all the memoranda that we have any use for in a call book.

The Change of Life in Health and Disease. By Edward John Tilt, M. D., etc. Fourth edition. *Philadelphia: P. Blakiston, Son & Co.* 1882. 8vo., pp. 184; cloth, $1.25; paper, 75 cts.

This is another of the valuable reprints of standard English writers which Messrs. P. Blakiston, Son & Co. are offering to the profession of America in a neat and serviceable form, and

at a price which brings them within the reach of all; and that too by an arrangement with the authors by which they secure to the latter a suitable remuneration for their share in the work.

This particular volume is one that we read with interest a few years ago, and we know of no other work among the many that have been published during the last few years that in any way takes the place of or supersedes this in treating of the affections to which women are liable at the period of the change of life.

It is a work of great value to the general practitioner and the specialist in diseases of women as well.

Mental Pathology and Therapeutics. By W. Griesinger, M. D., etc. Translated from the German (second edition), by C. Lockhart Robertson, M. D,, Cantab, etc., and James Rutherford, M. D., Edin. *New York: William Wood & Company.* 8vo., pp. 375; cloth (Wood's Library).

This volume is admirably translated from the German of one the foremost minds of Germany. Prof. Griesinger is an acknowledged leader of professional thought and practice in regard to various forms of mental alienation, and his work expresses the views of a large and influential school of medical philosophers and practitioners. Like many German writers, his methods of thought and expression are not always such as to be readily understood; and when he deals in metaphysical observations, as he does not infrequently, close attention and careful thought are necessary. The labor of translating such a work is an arduous one, and Drs. Robertson and Rutherford have executed the task well.

Materia Medica and Therapeutics. Inorganic Substances. By Charles D. F. Phillips, M. D., etc. Edited and adapted to the U. S. Pharmacopeia, by Laurence Johnson, A. M., M. D., etc. Vols. I. and II. *New York: Wm. Wood & Company.* 8vo., pp. 340; cloth (Wood's Library).

These are valuable volumes of "the library for 1882." The writer discusses the various inorganic substances of the materia medica; first describing very briefly the substance and its compounds, then the methods of absorption and elimination, then the physiological action, then the therapeutical action, then the preparations and doses. The subjects are taken in alphabetical order, and the arrangement is such as to make it an easy matter to refer to any desired topic, which is also facilitated by full and complete indexes.

Cerebral Hyperæmia; Does it Exist? A Consideration of some views of Dr. William A. Hammond, by C. F. Buckley, B. A., M. D., etc. *New York: G. P. Putnam's Sons.* 1882. 16mo. square; pp. 129; cloth, $1.00.

This little volume is a sharp and severe criticism of Dr. Hammond's monograph on "Cerebral Hyperæmia;" and while the author seems to us to fully sustain many of the grounds of criticism which he takes, there is in many places an appearance of personal feeling in the manner of expression which materially detracts from its value.

Lindsay and Blakiston's Physicians' Visiting List for 1883. For sale in St. Louis by Frank Rivers, 204 N. 5th St., and by other book-dealers.

This "old reliable" visiting list is in the field as usual, ready for the large number of physicians to whom it has long been familiar, and who prefer it to any other. It is safe to predict that more copies of this will be sold than of those issued by any other publishing house.

Fistula, Hemorrhoids, Painful Ulcer, Stricture, Prolapsus, and other Diseases of the Rectum. Their diagnosis and treatment. By William Allingham, M. D., etc. Fourth revised and enlarged edition. With illustrations. *Philadelphia: P. Blakiston, Son & Co.* 1882. 8vo., pp. 168; cloth, $1.25; paper, 75 cents.

So recently have we published a review of this exceedingly valuable work (vid. Courier for June), that we here only call attention to the fact that the publishers have placed it in their list of cheap publications. The matter is the same as that of the more expensive volume. It is only in the matter of elegance of form that the other is superior.

A Study of the Tumors of the Bladder; with original contributions and drawings. By Alex. W. Stein, M. D., etc. *New York: William Wood & Co.* 1881. 8vo., pp. 94; cloth.

This monograph of Dr. Stein's brings together in compact form the sum of our present knowledge upon the subject treated.

He has gone carefully through the literature of the subject and studied it attentively, and presented the results in a manner at once clear and satisfactory. We give our readers in another place the conclusions which he reaches. (Vid. Report on Progress—Surgery). It is a valuable contribution to surgical literature.

BOOKS AND PAMPHLETS RECEIVED.

First Biennial Report of the Michigan Free Eye and Ear Infirmary, and Eye and Ear Department of the Michigan College Hospital, for the two years ending September 30, 1882.———Report of the Board of Managers of the American Hospital for Skin Diseases to the Contributors. Philadelphia, 1882.———Labor Among Primitive Peoples. By Geo. J. Engelmann, A. M., M. D. Fifty-six Illustrations. St. Louis: J. H. Chambers & Co , 1882. 8vo.; pp. 203. C oth.———Slight Ailments. Their Nature and Treatment. By Lionel S. Beale, M. B., F. R. S. Second Edition, Enlarged and Illustrated. Philadelphia: P. Blakiston, Son & Co., 1882. 8vo; pp. 283. Cloth, $1.25. ———A Practical Laboratory Course in Medical Chemistry. By John C. Draper, M. D., LL. D., etc. New York: Wm. Wood & Co., 1882. 16 mo.; pp. 81. Cloth. ——Pharmacopeia of the United States. Sixth Decennial Revision. New York: Wm. Wood & Co. 8vo.; pp. 488. Cloth.———International Encyclopedia of Surgery. Edited by John Ashhurst, Jr., M. D. Illustrated with chromo-lithographs and wood cuts. In six volumes. Vol. II. New York: Wm. Wood & Co. 8vo.; pp. 754. Sheep.———A System of Surgery; Pathological, Diagnostic, Therapeutic and Operative. By Sam'l Gross, M. D., etc. Illustrated by upwards of 1,600 engravings. Sixth Edition, thoroughly revised and greatly improved. In two volumes. Philadelphia: Henry C. Lea's Son & Co., 1882. 8vo.; Half-Russia, sheep or cloth. Vol. i, pp. 1194: vol. ii., pp. 1174.———The Principles and Practice of Surgery. By John Ashhurst, Jr., M. D. Third Edition, enlarged and thoroughly revised, with five hundred and fifty-five illustrations Philadelphia: Henry C. Lea's Son & Co., 1882. 8vo.; pp. 1064. Half-Russia, sheep or cloth.———Medical Record Visiting List for 1883.———Conjoint Session of the North Carolina Board of Health, and the Medical Society of North Carolina, held in Concord, May 10th, 1882.———Transactions of the Minnesota State Medical Society, 1882.———Materia Medica and Therapeutics: Inorganic Substances. By Charles D. T. Phillips, M. D., etc. Edited and adapted to the U. S. Pharmacopica by Laurence Johnson, A. M., M. D., etc. Vol. I. New York: Wm. Wood & Co., 1881. 8vo.; pp. 298. Cloth. (Wood's Library).———Asthma, its Pathology and Treatment. By Henry Hyde Salter, M. D., F. R. S. First American from the last English Edition. New York: Wm. Wood & Co., 1882. 8vo.; pp. 284. Cloth. (Wood's Library). ———Medical Electricity. By Roberts Bartholow, A. M., M. D., LL. D., etc. Second edition, enlarged and improved, with one hundred and nine illustrations. Philadelphia: Henry C. Lea's Son & Co. 8vo.; pp. 291. Cloth.——— Incidental Effects of Drugs. By Dr. L. Lewin. Translated by W. T. Alexander, M. D. New York: Wm. Wood & Co, 1882. 8vo.; pp. 239. Cloth. ———A Guide to Therapeutics and Materia Medica. By Robert Farquharson, M.D., Edin., etc. Third American edition, revised by the author. Enlarged and adapted to the U. S. Pharmacopeia by Frank Woodbury, M. D. Philadelphia: Henry C. Lea's Son & Co., 1882. 12 mo.; pp. 526. Cloth.——— The Treatment of Disease by the Hypodermatic Method. By Roberts Bartholow, M. A., M. D., etc. Fourth edition, revised and enlarged. Philadelphia: J. B. Lippincott & Co., 1882. 12 mo.; pp. 365. Cloth, $2.00——— Walsh's Physician's Combined Call-Book and Tablet. Seventh edition. Published by Ralph Walsh, M. D., Washington, D. C,

TRANSLATIONS.

CANCER OF THE VERMIFORM APPENDIX OF THE CECUM.

Clinic of Prof. Thiersch. By Dr. Beger.

Patient, male, 47 years old, previously healthy. Three and one-half years back had a "boil" in the right inguinal region; there was much pain, and he was obliged to keep the bed.

July, 1879, the swelling was incised, and a quantity of odorless pus escaped. His condition immediately improved, but the wound did not heal; granulations sprung up, and finally a tumor formed. Never suffered from indigestion, nor from constipation. He also declared that neither offensive gases nor fecal matter escaped from the opening.

May 30, 1882, he entered the clinic. Condition: Large, emaciated and anemic. No fever, thoracic organs healthy, abdomen soft and flaccid. Abdominal organs seemed sound. Above the right inguinal fold there was an irregular tumor the size of a fist, and in a state of ulceration. Its edges were elevated and the center presented a crater-like depression. The ulcerated surface was of glandular structure. It could be moved with the abdominal walls, and moved synchronously with the underlying iliac artery. Round about the margins the skin was cicatricial, thinned and perforated with fistulæ. From the central depression frequently oozed, besides a very offensive pus, a clear serous liquid; a sound could be passed through it into the cavity, and the point felt through the abdominal wall. Below the tumor lay cancerous, fistulous, lymph glands. Under the microscope sections displayed a mass of tubules like Lieberkuhn's glands, and irregular cavities lined with cylinder and goblet cells. The stroma was composed of small, round cells and a little fibrous connective tissue.

Such a structure indicated an origin from the mucous mem-

brane of the intestine, yet there had been no indication of intestinal disease; also examination per rectum had disclosed nothing. In view of all the facts stated, the diagnosis was, cancer of the vermiform appendix, with involvment of the abdominal wall, but not including the cecum. The cavity accessible to the sound must be the ascending colon.

Treatment.—Good diet, baths; cleansing with chlorine water.

July 18.—Patient's condition being much improved, and he being anxious for operation, that step was decided upon. The tumor was found to arise internally from the appendix, which was cut from the cecum, and the whole mass removed after careful dissection from the large vessels and spermatic cord. As a continuation of the growth could be felt within the cecum, this was opened after closure of the intestinal canal on both sides with clamps; a papillary growth larger than a walnut projected into it from the mouth of the appendix. The convex part of the cecum was excised.

On the evening of the 19th patient died in state of collapse. —*Berlin Klin., Woch.*, No. 41, 1882.

RESECTION OF THE STERNUM—THE SITE OF AN OSTEO-CHONDROMA—CURE.

By F. Koenig, Goettingen.

The tumor involved the body of the sternum, extending above and beyond it a little past the insertion of the second rib. Laterally it extended but little beyond the bone. It was immovable, and covered with a thinned, but healthy, integument.

The patient, a woman of 36 years, appeared otherwise sound, and stated that the growth had existed for two and one-half years. There were no indications that the mediastinum was encroached upon. Diagnosis was consequently made of an endosteal tumor of the sternum, probably a myeloid sarcoma.

Operation, as the only hope, was suggested, and agreed to by the patient. It would be necessary to cut the bone away under the insertion of the first rib, and to cut through all the true ribs except the first; that the sternum should be raised, and

the tumor removed from the mediastinal aspect. The xiphoid, being outside the growth, could be left.

Familiar with numerous records of cases of injury to the chest, I was convinced of the comparatively small danger attending an opening into one or even into both pleural cavities. Animals do not die from asphyxia when both cavities are simultaneously opened, if the wounds are immediately closed again; the lung rapidly expands again. Experiment upon the cadaver demonstrates that the sternum and ribs (costal cartilages?) may be divided without opening the pleural sacs, but upon lifting out the sternum such injury could not be avoided. I also anticipated a possible opening into the pericardium, but did not apprehend a serious immediate result.

If the patient did not die upon the table in consequence of the possible double pneumo-thorax, I did not estimate the subsequent dangers, under antiseptics, as very great.

July 17, 1882, the operation was made under chloroform. Crucial skin incision and dissection of the flaps till the upper sound part of manubrium, xiphoid, and all costal cartilages were exposed. Next the upper ribs were divided, about 3 cm. (1 in.) from sternum, in such a way that they could be freed by an elevator from the underlying soft parts; then a blunt hook was thrust under them, and the incision completed upon this. It was found necessary to divide the lower ribs without such protection. The manubrium was divided under similar precautions.

So far all proceeded quietly, with no unfavorable symptoms. The next step was to raise up the severed sternum. The cut cartilages were hooked up, and the finger carefully pushed in between the tumor and mediastinum, and thus the attachments broken through. The sternum was then likewise raised and its detachment similarly proceeded with. When the mammary arteries were exposed a double ligature was applied, and they were then divided.

Despite all care, at about the level of the fourth rib the right pleural sac was opened, and the peculiar sucking sound betrayed the inrush of air. Gauze was placed upon the hole and held there by an assistant. A prominent part of the growth (which in the whole had internally about the same extent as externally) was found adherent to the pericardium; the sepa-

ration was effected with the scissors. A sucking noise, and the appearance of the heart itself, disclosed a fresh complication. The removal of the sternum was now rapidly pressed, but a third time was heard the rush of entering air as the finger operated upon the left side. As may well be supposed, there was now no time to investigate minutely as to the nature of this third lesion, all haste was made to close up the whole mediastinum. An assistant had followed the hand of the operator, pushing forward gauze, which he gently pressed in all directions against the mediastinal walls.

The wound was closed with sutures from below upwards; as the balloons were reached and covered they were withdrawn, so that continuous pressure upon the exposed parts was maintained. Two drainage tubes, sprinkled with iodoform, were inserted into the lateral ends of the wound, and a large antiseptic bandage was placed around the whole chest and a part of the abdomen.

The operation had lasted two and a half hours; considerable blood was lost; nevertheless she soon returned to consciousness. Little remains to be said. During the first few days the respiration was frequent, but exhibited no other change. The cardiac symptoms, on the contrary, from the 4th day on during several days, gave rise to alarm; there was great frequency of the pulse. A few doses of digitalis relieved this. The bandage was changed on the 13th day. An angle of the flap over the third rib was found gangrenous, possibly from the pressure of the costal cartilage at that point. In general the integument was united with the mediastinum. The gangrenous part lay in the midst of thick pus over the middle of the pericardium. Fresh bandages were now applied every eight days. Gradually the entire integumentary covering united with the sunken mediastinum; at present only a small granulating surface exists, in the midst of which is the necrosing tip of the left third costal cartilage. The woman is so well that she is able to take a journey.

The growth proved to be an endosteal enchondro-sarcoma, and occupied nearly the whole of the sternum.—*Centralblatt f. Chir.*, No. 42, 1882.

ABSORPTION BY THE SKIN OF SUBSTANCES DISSOLVED IN WATER.

From the French, by C. M. G. Biart.

At the recent Congrés de la Rochelle, Dr. Aubert showed that the smallest prick of a fine sewing needle is sufficient to allow thepassage of a solution of pilocarpine, in small quantities it is true, but sufficient to cause a localized sudation around the puncture, which can be revealed on a piece of white paper, on which it leaves an impression by means of a solution of nitrate of silver. He found, moreover, that a somewhat protracted rubbing of the healthy skin, with the tip of a finger dipped in a solution of pilocarpine, caused the alkaloid to penetrate, and provoked the sudation on places where no apparent epidermic sudation existed. He instituted a series of experiments in order to study the penetration through the epidermis of substances dissolved in water. From the results of these experiments he concludes that this penetration may take place through the epidermis without apparent external erosion; but that the essential condition seems to be the production of an epidermic effraction in the sheaths along the included portion of the hair shaft; it having been exclusively obtained in pilous regions. All conditions favoring the pulling of the hair (rubbing with a moist or a dry hand, volume, resistance and length of hair) also favor penetration; fineness of skin, and tenuity of the epidermis are unfavorable conditions, by reason of the poor development of hairs in these conditions; absence of hair is an eminently unfavorable condition for absorption. The possibility of causing the absorption of small quantities of soluble substances through the epidermis is easily conceived; but in order to obtain this result it is necessary that, before or during the contact of the dissolved substance, the cutaneous surface, and more especially the pilous regions, be rubbed with sufficient intensity with the palm of the hand; the only possible inconvenience liable to result from this practice would be a slight inflammation, a little redness or smarting confined to the hairy regions. It will be useless to rely on the simple bath, even protracted (two hours in the experiments), for the absorption of the smallest quantity of a soluble substance.—*Gaz. Hebd.*, No. 40., p. 658.

LOCAL TREATMENT OF PULMONARY CAVITIES.

Lokolowski.

In appropriate cases of cavities in the lung tissue due to inflammatory processes, and limited to a small region of the organ, the remainder being sound, Lokolowski has made use of direct injections into the cavities of a solution of carbol-iodine, in the strength of 1–20 per cent. Injections of carbolic acid solutions were always followed by temporary increase of temperature. The results obtained were not satisfactory, as the local as well as the general condition did not seem to be improved.—*Centralblatt f. Chir.*, No. 42, 1882.

SURGERY OF THE LUNGS.

Wilhelm Koch.

Having proved the uselessness of injections into the lung parenchyma, Koch concluded to resort to the galvano-cautery. The first experiment was made upon a man aged 24, suffering from cavities in the inferior lobe of the right lung. For three years there had been expectoration of offensive sputum.

A piece of the sixth rib was cut out, and the exact locality of the cavity ascertained by an aspirator. An opening into it was then made with the galvano-cautery. At another time, in order to reach other cavities, the burner made a fistula fourteen cm. (5½ in.) deep.

The patient, although not yet entirely well, is in a tolerable condition. Further attempts will be made to cause the closure of the other existing cavities.

Similar procedure was followed in a second case, with enormous amount of expectoration. The burner here opened a cavity the size of the fist, and another as large as a child's head, which were drained and washed out with antiseptic solutions. Death resulted seven days later—broncho-pneumonia of the opposite side and inflammatory degeneration of the portal vein. The expectoration had entirely ceased, and the wounds looked well.

Koch advises this method under the following conditions: 1. Chronic gangrene of the lungs with free expectoration of offensive matter. 2. Acute gangrene (after gunshot wounds). 3. Disintegration of the lung tissue in consequence of intrusion of foreign bodies into the bronchi.

More doubtfully appropriate would be cases of localized tuberculosis and of putrid bronchitis without evident ectasie. *Centralblatt f. Chir.*, 42, 1882.

Frozen Corpses.—Every corpse that is taken to the Paris Morgue, is now quickly converted into a block almost as hard as stone. This result is obtained by Carré's chemical refrigerator, which is capable of reducing the temperature of the Conservatory, where each body is laid out on something closely resembling a camp bedstead in stone, to 15° below zero centigrade. At the back of this room is a row of stove-like compartments, in which the corpses are boxed up and frozen hard before being exposed to public view. As an illustration of the intense cold thus artificially secured, a Paris journalist, in describing a recent visit to the morgue, says that in opening one of the compartments the attendant took the precaution to wear a glove lest "his hand should be burnt by contact with the cold iron." The corpse which was taken out of its receptacle had been there nine hours. The doctor who accompanied the visitor, struck the dead man on the breast with a stick, and the sound was just as if he had struck a stone.—*Scientific American,* Nov. 11, 1882.

Journal of Cutaneous and Venereal Diseases.—This new monthly is the successor of the *Archives of Dermatology.* It is edited by Drs. Henry G. Piffard and Prince A. Morrow, and published by William Wood & Company. Knowing thus much, we should incur no risk in predicting that it will be a valuable and most excellent publication. The numbers that have already appeared confirm this judgement. This is the only journal in the English language devoted to these specialties, and will, no doubt, speedily secure a large circulation, as it certainly should do.

SOCIETY PROCEEDINGS.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, Oct. 26th, 1882—The President, Dr. Jas. Tyson, in the chair.

Hypertrophy of the Prostate Gland, accompanied by Profuse and Fatal Hemorrhage.

Presented by Dr. J. B. Roberts, for Drs. J. M. Adler and Wm. Hunt.

The clinical history furnished by Dr. Adler is as follows: The patient, aged 66 years, of medium size, weighing 150 pounds, of regular habits, had enjoyed good health until within one year past. On number of occasions during the past year he has had slight hematuria. He passed his urine with ease, and only complained of slight perineal pain. On 12th Sept. last he arose in the morning in his usual health, but soon after breakfast he was attacked with sudden, acute pain in the bladder, which he was unable to empty. Dr. Adler saw him in a short time, when the patient complained of great hypogastric pain, and was much prostrated, with a blanched, sallow, cold skin, and a rapid and feeble pulse. A well defined pyriform swelling occupied the hypogastric region, extending upwards to the umbilicus. After stimulants and morphia had been given, about one pint of fluid blood was drawn off by the catheter, after which, this instrument becoming blocked, a double one was introduced, by means of which injections of warm water were thrown into the bladder, and another pint of broken-down coagula was removed. A solution of alum, 20 grains to the pint, was then introduced into the bladder, and allowed to remain. Despite the use of ol. terebinth and ol. erigeron, with opium suppositories, the hemorrhage continued, necessitating recourse to the catheter, injections, etc., to free the bladder from coagula. Death ensued on the sixth day from exhaustion, induced by the re-

peated hemorrhages. The diagnosis arrived at by Drs. Hunt and Adler was carcinoma of the neck of the bladder.

Sectio Cadaveris. The autopsy was a partial one, made in the undertaking establishment. Upon incising the hypogastrium, the distended bladder was at once seen, containing nearly a pint of clotted blood. This was removed by the hand through an opening in the viscus. when Dr. Roberts felt, near the vesical neck, protruding into its interior, a pear-shaped mass about the size and shape of the adult uterus. This, as the members of the society saw, was evidently a greatly enlarged middle lobe of the prostate gland, covered by unaltered mucous membrane. The lateral lobes were also enlarged. The mucous lining of the viscus was smooth and congested, presenting at one point two small circular depressions with cleanly cut edges. Owing to circumstances no further examination of the body was made.

Dr. Eskridge enquired whether the blood removed from the bladder at the autopsy presented a urinous odor. He had treated recently an interesting case of recurring hematuria, supposed to be due to a varicose condition of the veins of the vesical neck. The patient was a man æt. 77 years, who five years ago, and at intervals since, had lost considerable blood. The former attacks had yielded readily to ergot; but shortly after the onset of the last one, Dr. Eskridge had found the bladder distended with a large clot, which he had been unable to break down by injections of either alkaline or acid solutions. The secretion of urine was suppressed during the last twenty-four hours of the patient's illness, the blood drawn from the bladder presenting no characteristic odor. The man died apparently from uremia, two or more chills preceding death, although no convulsions occurred, and he remained conscious to the last. Unfortunately, no post-mortem examination was obtained.

Dr. Formad thought that the growth resembled rather a sarcoma than a carcinoma. He had seen two instances of round-celled sarcoma of the prostate. All growths starting from the epithelia of the genito-urinary tract, as well as from the cavity of the uterus, the kidneys and supra-renal bodies—in short, growths of all the organs arising from the middle

layer of the blastoderm, macroscopically resemble sarcoma, and usually prove to be such when microscopically examined.

Dr. Tyson said that this specimen possessed a special interest for him, inasmuch as he had had his attention forcibly directed to the differential diagnosis of a simple hypertrophy of the prostate from malignant disease of that organ, by having lately under his care a gentleman where ergot at first proved of much benefit, but in whose case the catheter was soon demanded. This instrument was used with unusual skill and gentleness by the patient himself, notwithstanding which blood occasionally followed its use. Exceedingly severe pains next developed, radiating from the bladder to the testicles, groins and inner aspect of the thighs. Emaciation soon set in, and he died at the end of fifteen months. At the autopsy, malignant disease of the prostate was found, involving by infiltration the lateral aspects of the bladder and the neighboring parts, so as to compress the nerves, thus accounting for the radiating pains complained of. He would like to know from Dr. Roberts whether his case presented this symptom of radiating pains, and also the source of the hemorrhage, as the smooth surface of the growth and the healthy condition of the mucous membrane were such as to excite surprise.

Dr. Roberts, in reply to the various questions propounded, said that only having made the post-mortem examination, he knew nothing beyond the facts given in the notes read. As to the source of hemorrhage, he would call attention to the two small erosions of the mucous membrane of the bladder as the probable source.

The specimen presented by Dr. Roberts, upon microscopic examination is found to consist of the histological elements composing the prostate gland. There is no evidence of any neoplasm, except a numerical hypertrophy of the structures of the organ. The specimen is an hypertrophic prostate gland.

Caseous Degeneration of the Kidneys.

Presented by Dr. J. B. Roberts, for Dr. Dunmire.

Owing to Dr. Dunmire not having seen the woman until within a few hours of death, the history is of necessity imperfect. She was a married woman, 31 years old, whose

husband is said to have infected her with some form of venereal disease. The husband had been dead about one year when the patient first came under treatment. There were no evidences of syphilis, so that the supposed venereal affection of the past had been presumably gonorrhea. When seen Sept. 14th, 1882, she was exceedingly ill; gave a history of general ill-health for the past few years, but dated the present trouble some weeks back, when she had bathed in the surf while menstruating. This was followed by a chill, since which she had steadily grown worse. When Dr. Dunmire saw her she complained of sore throat, difficult deglutition, anorexia, sick stomach, pain in the back, with sharp pain running towards the groin, especially on the right side, tenderness over the abdomen, and frequent scanty micturition. The pulse was 140; temperature, 103°; and there was profuse leucorrhea. An unfavorable prognosis was given, which was soon verified by her becoming unconscious, and she died six hours later.

Autopsy. The abdomen alone was allowed to be examined. All organs healthy, except kidneys and bladder. The latter contained a little urine and mucus; its walls were much thickened, and its lining membrane was congested. The left kidney had little true kidney structure left, but was converted into a group of seven or eight cysts, containing a white cheesy matter of a moderately firm consistence. The ureter was much dilated and thickened for about three inches from the pelvis of the kidney. The right kidney was normal in outline, but when incised revealed one large cyst with creamy contents, and also another small cavity containing a few minute calculi. Several of these could be felt through the walls of the normal ureter, thus accounting for the ante-mortem renal colic. The peri-nephitic structures were unchanged, as well as the capsules of the kidneys, although these latter were perhaps more adherent than normal.

Lymphomatous Tumor of Mediastinum.

Exhibited by Dr. W. S. Little, for Dr. G. C. Smith, of Rondout, N. Y.

The history of the patient from whom these specimens were removed is in brief as follows: A young man, æt. 24 years, had been but a few days under Dr. Smith's care, having come from Boston, where his physician had pronounced him phthis-

ical, and had recommended a sea voyage. During the past few months small nodular masses had developed in the muscular tissue of the right chest walls, near the median line in front, and also posteriorly. The axillary and intra-clavicular glands were involved. Shortly after Dr. Smith first saw him he developed marked dyspnea and died suddenly, without any evidences of marked lung disease, except perhaps some symptoms of pleuritis. There was apparently mitral disease, anasarca, specially of the lower extremities, gradually developed.

Sectio-Cadaveris. The skin was hard and friable; nodular masses were found disseminated through the muscular tissue of the chest walls, which had undergone some species of degeneration. The costal cartilages presented evidences of a degeneration similar to that seen in the muscles. On removing the sternum, the subjacent tissues were markedly pigmented, and the anterior mediastinum completely obliterated by a mass of the size and shape of the half of a large lemon, which pressed against the heart. The large bronchi were involved in the growth, otherwise the lungs seemed healthy; and evidences of slight pleurisy were found. The pneumogastric nerves were both involved, chiefly the left; and on further dissection the disease was found to occupy all of the lower part of the posterior mediastinum, involving the contiguous osseous tissues. The nerve involvement explains the sudden death. The diaphragm was also involved in the lower portion of the growth. The four portions of the growth shown to the society are: 1st—one of the subcutaneous nodules; 2nd—a small portion of left lung, near its root; 3rd—a portion of the anterior mediastinal growth, with part of trachea, bronchi and aorta; 4th—one-quarter of the tumor which, involving the diaphragm, projected from the left thoracic wall into the chest cavity.

Dr. Formad inquired whether there were any other evidences of cancer in the remainder of the body.

Dr. Little replied that none were detected.

Dr. Formad then said that he was unaware of any specimen of primary carcinoma of the mediastinum on record, and moved the reference of the specimen to the Committee on Morbid Growths, as it was probably a sarcoma,

The mediastinal growths are found, on microscopical examination, to consist of a mass of hypertrophic lymphatic glands, much pigmented. There are also seen adipose and fibrous tissues in a state of active proliferation.

Cirrhosis of Liver in the Stage of Enlargement.

Exhibited by Dr. E. T. Bruen.

T. W., aged 20 yrs., colored, had worked on farm since boyhood, and had been much exposed to weather. His habits were temperate; he was free from either syphilitic or malarial taint. Father is still alive, the mother died of phthisis. He was never robust, but had had only one severe illness, viz., typhoid fever, from which he convalesced perfectly, but he readily "took cold." He was first seen by Dr. Bruen at the University Hospital in Jan., 1882, when he gave the following history: Abdomen began to swell two years ago, without either pain or tenderness. Was obliged to rise at night to urinate. The abdominal swelling increased, and the previously regular bowels became constipated. Occasional sharp, shooting pains were felt across the chest, when lifting weights or working hard, and also slight, dull pain over the liver, lasting for a few moments only. When seen, abdomen measured 50 inches. On 19th of Jan. he was tapped, 19 qts. of fluid being removed, rendering plain a much enlarged liver, covered with smooth, nodular elevations, with the apex beat of the heart displaced upwards into fourth interspace. Mar. 18th 5 galls. more fluid were removed, after which pleural and bronchial complications arose, which soon subsided. May 6th, paracentesis by capillary needle was resorted to, which was followed by much localized tenderness around the site of the puncture. Symptoms of peritonitis developed next day, which terminated life the same evening. During life the diagnosis was most difficult and interesting. The enormous size of the liver, the palpable bosselation of its surface, giving a sensation like that of crepitating tissue, as though fluid lymph had been thrown out, and finally his abstemious habits, with absence of either syphilitic or malarial taint, suggested malignant disease. His age, the excessive rarity of primary carcinoma or sarcoma of the liver, with his family history, all negatived this view. He had had some dyspepsia. Enlargement of the liver, connected

with catarrh of the bile ducts, would have presented symptoms of jaundice and intermitting temperature, terminating by death from cholesteremia. The case then was one of simple cirrhosis.

Sectio Cadaveris. The abdomen contained six gallons of purulent fluid. Both the parietal and visceral peritoneum were covered with a thick coating of inflammatory lymph, tinged with blood, from multiple capillary hemorrhages. The abdominal veins were all replete with blood. The liver weighed nearly 5½ lbs., was of a nutmeg appearance on section, was indurated, and presented a bosselated, nodular appearance. The gall-bladder was thickened and contracted about two-thirds in bulk. The bile ducts were normal. The spleen was covered by a pseudo-cartilaginous capsule, but was otherwise normal, as were also the stomach, pancreas, intestines, kidneys and suprarenal bodies. The abdominal lymphatic glands were slightly enlarged.

Dr. Seiler remarked that having seen the case during life, it was almost impossible to divest oneself of the idea of malignant disease. He thought that the projections were the unaltered portions of the liver, which had been compressed and squeezed out by the contracting interstitial tissue.

Dr. Bruen remarked upon the obscurity of the etiology.

Dr. Tyson asked Dr. Formad, who had examined the specimen microscopically, whether he considered it to be in the first or second stage of the affection.

Dr. Formad replied that he considered it to be in the commencing second stage, and detailed the microscopical appearances.

Dr. Tyson, after briefly adverting to the causation of cirrhosis, said that his reason for asking Dr. Formad whether he considered that the organ was in the first or second stage of cirrhosis, was that some few years since an important insurance case had been argued in our courts, where the defence was set up that the man had not a cirrhosed liver, because it was enlarged. For his part he had no doubt that a liver could be in the second stage of cirrhosis and yet enlarged; there might be enlargement from fatty infiltration concurrent with interstitial inflammation.

C. B. Nancrede,
Recorder.

ST. LOUIS MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, July 11th, 1882—Dr. Dean in the Chair.

Ossified Muscles.

Dr. Carson.—I have a very interesting case to present to the society. A child was brought to the clinic by its mother with what appears to be a complete ossification of the sterno-cleido-mastoid, especially the anterior half. There is free motion of the head. It is not quite as hard as bone, but it is much harder than cartilage. I have never seen a case of the kind before and have not heard of such a case.

Dr. Pollak.—Could it rotate its head?

Dr. Carson.—Yes, sir; there was perfectly free motion of the head.

Pulmonary Hernia.

Dr. Todd.—This case reminds me of one which I may perhaps bring before the society before long. I cannot give an exact description of it at present; but it seems that two or three of this patient's ribs are not united to the sternum on the right side at all. The patient is a boy 11 years old. When he coughs there is actually a pulmonary hernia. The lung apparently bulges out so far as to form quite a perceptible tumor right next to the sternum. The costal cartilages of the upper two or three ribs are not developed. You can feel the pulsation of the heart. It is a very singular malformation. The boy works naturally. I cautioned the mother against allowing him to engage in anything that required a large amount of labor. He is a poor boy and I thought that they might put him at hard work. When the boy coughs there is a pulmonary hernia, making a tumor as large as a lemon.

Dr. Kingsley.—It sometimes happens that the sterno-cleido-mastoid muscle in newly born children is very much hypertrophied, so much so that it is a deformity, which in the course of a few months disappears.

Dr. Carson.—In this case the muscle is of the normal size. There is no hypertrophy whatever. I have seen such cases as Dr. Kingsley refers to. In this case the muscles are of about the same size on both sides; the only difference seems to be in the hardness of one; the other is normal.

Laryngitis Simulating Caries of the Spine.

Dr. Todd.—I would like to ask the opinion of the society upon a case that recently came under my charge, which was of decided interest in certain directions. A little boy between four and five years of age, evidently robust, had symptoms that led his physician to suspect that he had disease of the spine in the cervical region. The child carried his head stiff, there was a slight hump already upon the shoulders, and he complained of pain in the region of the neck. The mother said that he cried a great deal during the washing of his neck, and the physician in charge was led to believe that the child had caries of the spine. The child subsequently came into the hands of another physician, during the sickness of the attending physician I believe, and an examination of the child led him to think that the trouble was more in the region of the larynx than in the spine. The child could stoop down and pick up anything, which seemed to indicate that there was no difficulty in the spine. He sent the child to me, and upon an examination of the throat I found that the mucous membrane of the whole anterior part of the larynx was very much congested, and also that the tonsils were enlarged. The voice was not harsh, but muffled. There was a general pharyngitis. I told the parents and also the physician that it seemed to me the condition of the throat would account for all the symptoms. There might be some other trouble, but it seemed to me that, as the child was small, the condition of the throat would account for all the symptoms. There might be some bronchitis, or, as the doctor called it, asthma. I don't know whether children so young as that have the asthma. Under my treatment the child improved, and I noticed that it became much more lively; it played more and moved its head freely, which it had not done before. The child is evidently greatly relieved. This child had been suffering for a long time, and the mother tells me it was a very robust child. It has come to be comparatively pale. Whether the whole trouble was due to the condition of the larynx or not, this was evidently entirely overlooked. It is a very important point in my opinion to look carefully at the larynx.

Dr. Carson.—I saw a case, somewhat similar to the one de-

scribed by Dr. Todd, some weeks ago. A child was brought to my office with scrofulous sores, and with very much the same condition of the neck. On examining the eyes I found that the child avoided the light. I suppose the peculiar position in which the child held the head was due to its avoidance of the rays of light. I didn't examine the larynx.

Chrysophanic Acid—Naphtha.

Dr. Hardaway.—If there is nothing else before the society I wish to make a few remarks. It will be remembered that some time ago I made some remarks on the use of chrysophanic acid in psoriasis. At the time that I made those remarks I spoke very favorably of the chrysophanic acid in this usually intractable trouble. It certainly does have a great effect upon the disease, and causes its disappearance very rapidly, although it does not prevent its reappearance any more than any other treatment. It certainly is as favorable as any of the other external agents and effects a cure much more rapidly. Within the last few months I have tried naphtha, at the suggestion of Prof. Gibson, of Vienna. The objection to chrysophanic acid is that it soils the clothing, and is likely to cause an inflammation of the surrounding parts. The most excellent results were claimed for the naphtha; it is said that it acts about as well as the chrysophanic acid in psoriasis, and that it doesn't cause any inflammation, and is perfectly clean. I have used it to some extent during the past few months, and I have come to the conclusion that it doesn't possess any great value. That is my personal experience. Its effect is much slower than the acid. It makes quite a good remedy where we want to avoid the staining, as on the face and head, for it doesn't cause that discoloration which makes the objection to the chrysophanic acid. Dr. ————, of Glasgow, recently made some very interesting experiments with the acid. He conceived the idea that this might be a good constitutional remedy. He noticed that when he made the application to one side of the body the other side got well without the application of the acid. He made a number of experiments and finally gave it internally. He found that the remedy was well borne and that the eruption faded gradually under its use, although it took a somewhat longer time; nevertheless the eruption disappeared.

I have tried it internally myself lately, particularly in one case, and I can say the drug is very well borne, causing no inconvenience whatever. As to the effect upon the eruption, I am not prepared to say. I will report at a later day.

Injury of Spine—Dislocation of Neck.

Dr. Saunders.—I ought to have read a paper to-night. I haven't prepared one, but I will report two or three cases instead. One was a dislocation or fracture, I don't know which, of the spine. Several weeks ago I was called to see a man who had fallen from a pile of coal, only a few feet, the night before while in a state of intoxication, and had lain all night in a helpless condition. In the morning he was found and taken up to his room, which was just above where the accident happened, and I was called. I found that his neck was broken or dislocated, we could not determine which, at the sixth cervical vertebra. There was a deep depression, and the neck was rigid, and in very much the position we see in cerebro-spinal meningitis. The man was utterly lifeless, without sensation and without motion in his whole body, except that he could raise his right hand slightly from the bed. When I first saw him, which was about twelve hours after the accident, he had no sensation whatever in any part of his body except as you approached the clavicle, where the sensation was normally acute. This is the region of the ramifications of the branches of the cervical plexus. Over the neck and head there was normal sensation. He was unable to move his head, because the spine was rigid and fixed. The respiration was entirely diaphragmatic, the costal muscles taking no part whatever. As the diaphragm relaxed, no doubt the abdominal organs falling back gave a sort of shock to the walls of the chest. But otherwise the chest was perfectly motionless. This was only a passive respiratory motion. The breathing was quite rapid. He could speak, but only in short syllables on account of the shortness of his breath. The pulse was normal. With the assistance of Dr. Meisenbach I attempted to replace the dislocation or fracture—I don't know which it was. I think it was a dislocation, possibly complicated with a fracture. We told the man that it was a desperate case, but that it was all that could be done. He consented to the attempt, and we tried

extension. I made strong pressure from the front while Dr. Meisenbach made extension. We could feel the grating of some of the articular surfaces upon each other, but there didn't seem to be much motion of the neck afterwards. I visited him again that night and used the catheter, drawing off a large quantity of urine. The temperature was 104°. It seemed to me to be rather remarkable to have such a high temperature developed within 20 hours. The pulse was quick then, and the respiration was very much quickened. Next morning he began to be a little delirious. I gave him a sedative mixture. Of course there was a fatal prognosis in the case, and as the man begged to have something to quiet him I gave him, I think, 10 grains of chloral hydrate, and a dose of bromide of potassium. The man died about three o'clock on the morning of the second day after the accident. The sedative mixture didn't seem to have any effect whatever. He was conscious to the last, although he was more or less delirious.

Dr. Dean.—I recollect a case of a man who had an injury of the spine in the cervical region, and Dr. Hodgen was quite sure he could feel the dislocation in the side of the neck. The man had complete paralysis both as regards feeling and motion for some hours, but he recovered from that. We tried extension and reduced it as well as we could. So matters continued and the man improved rapidly. He kept his head turned somewhat to the left side. The injury was on the right side. After two or three days he turned his head and we thought there had been a reduction, but we could feel the supposed dislocation just as we had felt it before, and the man left with the same state of things.

Dr. Carson.—I saw a case of fracture of the spinous process at the time of the Southern Hotel fire, in which there was no paralysis at all. It was some time after the accident that this condition was discovered. The patient was unconscious for some time, and upon returning to consciousness complained of pain in turning the head, and an examination revealed a fracture of the spinous process. There was no pressure upon the cord, and we supposed that it was simply a spinous process that was broken off. It was rather a strange condition.

Dr. Todd.—I recollect hearing Dr. Hodgen say that fractures of spinous processes are more common than we generally imagine. There is a specimen in the museum of the Missouri Medical College of a fracture involving the whole posterior part of the arch of the four lumbar vertebræ, in which there seems never to have been even a ligamentous union. The parts that rubbed against the neighboring parts are quite smooth.

Dr. Post.—I have seen the statement made, in fact I think Dr. Hodgen made it to me, that in one case he saw there were 12 fractures of spinous processes. I can't be positive about the number, but I think it was twelve.

Dr. Todd.—Some animals have no spinous processes at all. Those animals which have great flexibility are without spinous processes. At least in the lumbar region, they are very small and far apart.

Dr. Steele.—Speaking of the absence of spinous processes recalls to mind a case that I saw a few weeks ago. It was a little girl about 11 years of age, in whom there was an entire absence of spinous processes and arches in the lumbar vertebræ. This caused a curvature of the spine, a marked incurvation at that point. My idea was that the posterior portions of the vertebræ were increased to sustain the weight above, and thus the spine was bent in that way; the vertebræ gave way, and there was marked incurvation, which was becoming worse. I advised the use of a support, so as to prevent the deformity from increasing. The place is about two inches in length.

Inflammatory Diarrhea.

Dr. Montgomery.—I think it is about time that the attention of the profession should be called to the diseases of children, or rather some of the diseases of children. We have all noticed that in the statistics that are published a great many deaths among children are stated to be due to cholera infantum. Now I think that in a great many cases what is called cholera infantum is nothing else than inflammatory diarrhea. I think that disease carries off more children than cholera infantum. I do not consider cholera infantum a very malignant disease. Inflammatory diarrhea is a much more dangerous disease. I notice sometimes that it is stated in the papers that cholera infantum has carried off a great many children. I don't think

that is so; and I want to call the attention of the profession to the subject. A child with cholera infantum is generally taken with sudden vomiting, and a very free evacuation from the bowels—rice water evacuations. Then there is great thirst, and it will drink water greedily. In these cases I usually put a mustard plaster on the abdomen—a large plaster, so as to make the skin quite red; and after removing the poultice I give a small quantity of carbonate of soda. I am confident that nine cases out of ten of the so-called cholera infantum are really inflammatory diarrhea, entero-colitis, a very dangerous disease. In inflammatory diarrhea the child is usually ailing a day or two; is fretful; there will be thirst and nausea; there is little pain, and the evacuation of the bowels become frequent. The operations are very various. Sometimes they are like the washings of beef, sometimes purulent, and then again sometimes there is a little blood. The child is thirsty, restless, and has lost its appetite. In this affection there is nothing like the opiates, very small doses of opiates. They must be administered very cautiously, but I believe in most cases they will cure the trouble. A little lemon, loaf sugar and water is a very good drink. We should be careful not to give any farinaceous food, no fatty food or milk. I remember that one of my own children once had a very violent attack of inflammatory diarrhea, and I always felt that I saved its life by the use of mustard poultices and the other treatment which I adopt. I put a large mustard poultice on the stomach, and kept it on as long as it could be borne. I give the opiates in small doses, and I am satisfied that they have an excellent effect in inflammatory diarrhea. Bismuth has been of no service in this complaint in my hands, it has always failed.

Dr. Shaw.—It is gratifying to hear the expression made by Dr. Montgomery in regard to the fatality of cholera infantum in his hands. I must confess that my experience has been that cholera infantum has been a very fatal disease. I have frequently seen children that were perfectly well in the morning, suddenly taken with vomiting and purging, and collapse in the space of three or four hours—the patient would die sometimes before the lapse of that time. These cases, I think, fully justify the term cholera infantum. Another class of cases,

however, where there is some vomiting, where there are discharges from the bowels which are quite watery—often as many as eight or ten passages in an hour—are those which the doctor has spoken of; and I wish to add my testimony to the efficacy of small doses of calomel in just such cases. This same sort of cases were particularly prevalent in my vicinity during this last summer. I have felt that it was due probably to the changeable weather, which gave rise to a catarrhal condition in many instances, in my opinion, of the duodenum as well as of the stomach, and that this catarrhal condition and swelling of the mucous membrane causes difficulty in the passage of the food through the intestinal coils, and subsequently a decomposition of the food and materials in the intestinal canal produces an irritating diarrhea. Calomel is a very effective remedy in this disease. By giving small doses we can check the trouble probably in two or three hours. The passages become more and more consistent, and the child will get well. In regard to the entero-colitis, I must say that I have found it to be an extremely fatal disease.

Dr. Saunders.—In reference to the treatment of these cases I will say that last week I was very favorably impressed with the use of peptonized food. I have an excellent extract prepared in New York. I had a case of cholera infantum so violent that I gave a very unfavorable prognosis. The child was almost in a state of collapse, it was pale and almost pulseless. I gave it peptonized food frequently, and it improved rapidly. The additional treatment that I gave was a teaspoonful of water at the ordinary temperature, which was vomited promptly. I then gave water with a few drops of brandy every five minutes, and the vomiting was promptly checked. Of course sinapisms were used over the abdomen, both to arouse the nervous system and for the purpose of counter-irritation of the stomach and intestinal canal.

Dr. Carson.—I was called to see a child with cholera infantum that vomited everything. It could keep nothing on the stomach at all, and it became evident that unless something was done the child would die. So finally I took a hypodermic syringe and injected water and a few drops of brandy. I repeated this in the course of fifteen minutes, and in a short

time the child began reviving. Then I administered carbolic acid, bismuth and peppermint water in small doses. Then the child tolerated gum water and finally made a good recovery.

Dr. Funkhouser.—I have been very much interested in these cases. It has always been my custom to give, in these cases of inflammatory diarrhea, small doses of carbolic acid and bismuth, and in addition to this treatment I invariably administer blackberry brandy, and I have come to the conclusion that more benefit has been derived from this treatment of these cases than from any other. One particular point that I wish to call attention to is the necessity of giving the patient plenty of fresh air. I think that most of these cases are due to excessive heat, especially such as prevents sufficient perspiration going on.

Stated Meeting, July 25th. 1882.—Dr. S. G. Moses in the Chair.

Sarcoma of the Upper Jaw.

Dr. Mudd.—On the eighth of January last I removed, with the assistance of Dr. Hodgen, the upper jaw of a patient. We removed it on account of a sarcoma that had taken its origin far back on the alveolar margin of the upper jaw. It had produced an absorption of the bone, so that the teeth having loosened were removed from the jaw. The patient was in my office this evening, and I asked him to step into the society room and allow the members to see the amount of reproduction of fibrous or bony tissue of the palate. The soft tissues of the cheek have been drawn inward, to meet the margin of the palate, and complete the closure of the opening left by the operation. The bone around the margin of the tumor was removed. During the operation the patient's head was thrown back and the blood flowed through the pharynx, or by the nose, and was removed with a sponge. In making the section through the hard palate, a pair of straight bone forceps was used. The septum of the nose was left intact. The incision was carried well back towards the posterior border of the hard palate, and then the left pterygoid process was separated from the maxillary tuberosity by bone nippers. There has been no evidence of return, and but slight deformity remains.

In connection with this case, I will say that I have removed the entire superior maxilla in this way, through the mouth, four times, and I have never made more than the simple incision in the median line of the lip. Last summer I removed a tumor from the upper jaw—a rapid growth in an old man 65 years of age, a very fleshy man. In this case I removed the entire jaw, taking out the malar process and part of the malar bone. I removed the orbital portion of the superior maxilla. The tumor in this case had a diameter of two and a half inches. It was removed through the mouth. I think there are a number of advantages to be gained by operating through the mouth. In the first place we avoid deformity. The view is good, and space ample for work if the patient's head is thrown well back, the recumbent position being maintained, and there is no danger of strangulation. Instead of being obliged to look upwards, you look down. Usually in these cases the hemorrhage is not great, but I have seen some cases in which the hemorrhage was considerable. I remember a case on which Dr. Hodgen operated some ten or twelve years ago, in which there was very profuse hemorrhage.

Tumor of Bladder.

Dr. Prewitt.—I have a specimen which I will present to the society. This is a tumor of the bladder. The case was brought to me by Dr. ———, of Carondelet, something like three weeks ago. He had had hematuria, and the character of the trouble being obscure, the doctor brought him to me to have him examined. After examining the case, I made a diagnosis of tumor of the bladder, and it was of comparatively rapid growth, I supposed it to be malignant. The man died, and we were fortunate enough to get a post-mortem. I have not had time to examine the specimen until this evening, but the slight examination I have made seems to confirm my diagnosis. I have some notes of the case, which I will read: John S———, 51 years of age, saloon keeper, having had previous good health, and his habits being temperate, sought advice for relief from hematuria. He urinates ten or twelve times in 24 hours; no pain nor tenesmus. That is dated June 5th. He noticed this condition for the first time about a month ago. His general condition was good. Urine slightly alkaline, and mixed with

blood corpuscles and albumen. No casts in urine. Occasionally a clear specimen of urine. Prostate normal or only slightly enlarged. No difficulty in passing large catheter. Exclude stone, renal and urethral lesions. Diagnosis, hematuria of vesical origin.

June 12—No change. June 13—Detected a tumor one and a quarter inches in length, and of the thickness of a lead pencil, club-shaped near the base, evidently attached to the wall of the bladder. Diagnosis tumor of the bladder. On the 16th, the patient was much depressed, with symptoms of cystitis. On the 20th, the urine was strongly fetid and alkaline, containing earthy phosphates and mucus. Bleeding almost stopped. 25th—Ordered opium enemata to relieve tenesmus. 30th—Enormous discharge of mucus and urine every ten minutes. Use opium enemata. Phosphatic deposit produces much trouble, occasionally clogging up the urethra; have to remove it and wash out the bladder with a double catheter frequently. July 7th—Phosphatic concretions cause much distress in the urethra. Had two chills and subsequent fever. Order quinine in scruple doses, and morphine suppositories. On the 14th, the earthy phosphates had almost ceased to form, but he was unable to pass his urine, and it had to be drawn with the catheter. The washing of the bladder was continued, but any fluid but milk caused much distress. On July 16th the patient complained of intense pain in the bladder, and on July 18th he died. On making a post-mortem examination this tumor was found. As I said, I have not had time to make a thorough examination of the tumor, but, without making a microscopic examination, I am satisfied that the tumor is maligant. There was not a very marked cachexia.

Diagnosis of Ovarian Cysts.

Dr. Carson read a paper on the Differential Diagnosis of Ovarian Cysts, and Cysts of the Broad Ligament, by an examination of the contents. (Vid. Sept. Courier, p. 208.)

Dr. Maughs.—I have no doubt of the correctness of Dr. Carson's conclusions. I am satisfied that there is no chemical test for determining the character of a cyst. There is no pathognomonic and morphological element peculiar to these cysts. It has been proven that it is impossible to determine

from either a microscopic or chemical test of the fluid the character of the cyst from which it has been taken. I have no doubt that cysts of the broad ligament are frequently derived from the same source as cysts of the ovary. Possibly germ cells of the ovary, that are discharged at the time of the rupture of the Graafian vesicle, are carried off and developed in the broad ligament.

Dr. Dean.—I think that it is usual to expect too much of the microscope, or to grant too little to it. It seems that a great many persons get the idea that all the other aids are to be discarded, and that we must rely solely upon the microscope, without using the judgment in any other way. I have made a few examinations, always after the post-mortem, or after the cyst has been removed from the body, and I have given the subject a good deal of study, commencing especially with Waldeyer's investigations, as far back as 1870, and before. I don't think that any man can always tell positively by an examination of the fluid microscopically and chemically alone, that the tumor is of this or that part; but the microscope assists us and enables us to determine points that we could discover in no other way. By its aid it was shown, as it was never shown before, that the ovaries are formed, not from the peritoneal covering at all, but that they come from the inner layer—are formed from the epithelial layer; and so of the Graafian vesicles themselves. We have a layer of connective tissue with a cellular tissue lining it. The cellular tissue grows into the connective tissue, and the connective tissue into the cellular layer, and in this way little plugs or follicles are formed that soon become separated from the epithelial surfaces of the ovary, and whenever one becomes choked off we have a Graafian follicle. Their number, in the beginning, is comparatively small, but the possibility of increase is almost unlimited during the time up to the age of sterility. These tubules may or may not develop; they may commence early in life to take on a pathological condition; they may develop into dermoid cysts. It has been shown that the contents of the tubules of the Graafian follicles are almost pure dissolved paralbumen. I don't think it of any use to attempt to draw a diagnosis between cysts of the broad ligament and cysts of the ovaries by the examination

of the fluids; but I think it is demonstrated as far as can be demonstrated—and a large number of tumors of the abdomen have been examined—I think, at least, it is demonstrated pretty well, that all the cystic tumors of the broad ligament come from parovarian tubules, that they are developed originally from the same mucous surface as the follicles of the ovaries, that they are frequently continuous with the mucous surface lining the Fallopian tubes, and that these tubules may become separated off, or, as it were, transplanted. It is a mistaken idea that is held by some, as to the process of secretion. The fluid is a transudate on the side of the blood, and other constituents are formed on the cellular side, either by the living cells by partial metamorphosis, or by the degeneration of these cells. Many of these cells, characteristic of the surface, may float slightly changed and be made out by microscopical examination. I don't think we can rely on the microscope or chemistry alone in the diagnosis of these tumors, any more than we can rely upon any one symptom in the diagnosis of any disease, and I don't now remember any one symptom or macroscopic phenomenon that can be taken as absolutely certain and infallible. I think the microscopic and chemical examinations are certainly of value in a great many cases, and that the danger from a small aspiration is small compared with the gain from these aids, and that they ought always to be employed.

Dr. Carson.—There is no doubt that the majority of cases can be made out—a differential diagnosis can be made in abdominal tumors, but there are cases in which it is a difficult matter to differentiate, and it is when these present themselves that we feel the importance of some means of differentiation. But these are the cases in which we find that the examination of the fluid is barren of result, at least I have found it so in the two cases which I have reported.

Dr. Dean.—I would like to say that it is not claimed by me that there is ever a difference between the fluids of cysts of the broad ligament and of ovarian cysts, but just the opposite, because they have the same primordial origin, and each may contain paralbumen, metalbumen, mucin, peptones, and the same epithelial cells.

Dr. Carson.—There is not only one case, but there are numberless cases where paralbumen has been found in other fluids than those taken from ovarian cysts and cysts of the broad ligament. While the microscope is exceedingly useful to us in many cases, I think its importance has been overrated by some.

Dr. Dean.—I would like to be understood in this matter. I think the whole tenor of my remarks has been that there are cases in which we cannot diagnose an ovarian cyst, but that in a great many cases we can assist in the diagnosis of them by a microscopic and chemical examination of the fluid, and that we should always make use of this aid.

Dr. Carson.—It is not in the majority of cases that we are unable to make a diagnosis, it is in those cases where the diagnosis is almost impossible that we seek the value of the fluid as an aid, and it is almost universally agreed that the fluid is of little aid.

ST. LOUIS OBSTETRICAL AND GYNECOLOGICAL SOCIETY.

At the annual meeting of the St. Louis Obstetrical and Gynecological Society, held Nov. 16th, the following officers were elected for the ensuing year:

T. L. Papin, President; W. H. Ford, Vice-President; Walter Coles, Recording Secretary; M. Yarnall, Corresponding Secretary; T. F. Prewitt, Treasurer.

The Sanitary News is the name of a new semi-monthly published in Chicago. It is said to have financial backing sufficient to make its success assured. It will be a valuable paper for all who contemplate building houses for themselves and others, and will discuss problems in which all physicians are interested, as they may be able by having accurate knowledge themselves to secure their patients from danger to health and life. We wish all success to our new neighbor in the work of diffusing the truth upon sanitary matters. It will contain twelve two-column pages, and is under the editorial management of G. P. Brown.

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